TIM S.p.A.
Form 20-F
April 16, 2019
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**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, D.C. 20549**

**FORM 20-F**

**REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

**OR**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended: December 31, 2018**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from N/A to N/A**

**OR**

**SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**Date of event requiring this shell company report**

**Commission file number 1-13882**

**TIM S.p.A.**

**(Exact name of Registrant as specified in its charter)**

**Italy**

**(Jurisdiction of incorporation or organization)**

**Via Gaetano Negri 1, 20123 Milan, Italy**

**(Address of principal executive offices)**

**Piergiorgio PELUSO**

**Head of Administration, Finance and Control**

**TIM S.p.A.**

**Corso d Italia, 41, 00198 Rome, Italy**

**+39.06.36.88.1**

**Carola Bardelli**

**Head of Investor Relations**

**TIM S.p.A.**

**Corso D Italia 41, 00198 Rome, Italy**

**+39.06.36.88.1**

**investor_relations@telecomitalia.it**

**(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)**

**Securities registered or to be registered pursuant to Section 12(b) of the Act:**

| Title of each class | Name of each exchange on which registered |
|---|---|
| American Depositary Shares, each representing 10 Ordinary Shares (the **Ordinary Share ADSs** ) | The New York Stock Exchange |
| Ordinary Shares (the **Ordinary Shares** ) | The New York Stock Exchange* |
| American Depositary Shares, each representing 10 Savings Shares (the **Savings Share ADSs** ) | The New York Stock Exchange |
| Savings Shares (the **Savings Shares** ) | The New York Stock Exchange* |
| Guarantee of Guaranteed Senior Notes due 2018 of Telecom Italia Capital | The New York Stock Exchange** |
| Guarantee of Guaranteed Senior Notes due 2019 of Telecom Italia Capital | The New York Stock Exchange** |
| Guarantee of Guaranteed Senior Notes due 2033 of Telecom Italia Capital | The New York Stock Exchange** |
| Guarantee of Guaranteed Senior Notes due 2034 of Telecom Italia Capital | The New York Stock Exchange** |
| Guarantee of Guaranteed Senior Notes due 2036 of Telecom Italia Capital | The New York Stock Exchange** |
| Guarantee of Guaranteed Senior Notes due 2038 of Telecom Italia Capital | The New York Stock Exchange** |

**Securities registered or to be registered pursuant to Section 12(g) of the Act:**

**None**

**(Title of Class)**

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**

**None**

**(Title of Class)**

**Indicate the number of outstanding shares of each of the issuer s classes of capital or common stock**

**as of the close of the period covered by the annual report.**

Ordinary Shares 15,203,122,583

Savings Shares 6,027,791,699

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Note Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of large accelerated filer , accelerated filer , and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standardst provided pursuant to Section 13(a) of the Exchange Act.

The term new or revised financial accounting standard refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If Other has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

*

Not for trading, but only in connection with the registration of American Depositary Shares representing such Ordinary Shares or Savings Shares, as the case may be, pursuant to the requirements of the Securities and Exchange Commission.

** Not for trading, but only in connection with the registration of the corresponding Guaranteed Senior Notes of Telecom Italia Capital (a wholly-owned subsidiary of TIM S.p.A.).

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## INTRODUCTION

Telecom Italia S.p.A., named also TIM S.p.A. , is incorporated as a joint stock company under the laws of Italy. As used in this Annual Report, unless the context otherwise requires, the term Company means TIM S.p.A. the operating company for fixed and mobile telecommunications services in Italy and the holding company of the Tim Group that is engaged principally in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector.

The terms we , us and our refers to the Company, and, as applicable, the Company and its consolidated subsidiaries.

Unless otherwise indicated, the financial information contained in this Annual Report has been prepared in accordance with International Financial Reporting Standards issued by the International Accounting Standards Board (designated as **IFRS** ).

Unless otherwise indicated, any reference in this Annual Report to Consolidated Financial Statements is to the Consolidated Financial Statements for the year ended December 31, 2018 of the TIM Group (including the notes thereto) included elsewhere herein.

References herein to TIM websites are textual references only and information on or accessible through such websites does not form part of and is not incorporated into this Form 20-F.

### Cautionary Statement for Purposes of the Safe Harbor Provisions of the United States Private Securities Litigation Reform Act of 1995.

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements. This Annual Report contains certain forward-looking statements.

Forward-looking statements are statements that are not historical facts and can be identified by the use of forward-looking terminology such as believes, may, is expected to, will, will continue, should, seeks or similar expressions or the negative thereof or other comparable terminology, or by the forward-looking nature of discussions of strategy, plans or intentions.

The forward-looking statements in this Annual Report include, but are not limited to, the discussion of the changing dynamics of the telecommunications marketplace, including the continuing developments in competition in all aspects of our businesses from new competitors and from new and enhanced technologies, our outlook for growth in the telecommunications industry both within and outside of Italy, including our outlook regarding developments in the telecommunications industry, and certain trends we have identified in our core markets, including regulatory developments.

Such statements include, but are not limited to, statements under the following headings: (i) Item 3. Key Information 3.1 Risk Factors , (ii) Item 4. Information on the TIM Group 4.1 Business 4.1.7 Updated Strategy , (iii) Ite 4. Information on the TIM Group 4.3 Regulation , (iv) Item 5. Operating and Financial Review and Prospects , (v) Item 8. Financial Information 8.2 Legal Proceedings and (vi) Item 11. Quantitative and Qualitative Disclosures About Market Risks , including statements regarding the likely effect of matters discussed therein.

Actual results may differ materially from those projected or implied in the forward-looking statements. Such forward-looking information is based on certain key assumptions which we believe to be reasonable but forward-looking information by its nature involves risks and uncertainties, which are outside our control, that could significantly affect expected results.

The following important factors could cause actual results to differ materially from those projected or implied in any forward-looking statements:

- our ability to successfully implement our strategy in the future;
- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;

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**Introduction**

- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;
- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;
- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;
- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;
- our ability to manage any business or operating model transformation plans;
- disruptions or uncertainties resulting from the United Kingdom s expected exit from the European Union;
- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and
- the costs we may incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

The foregoing factors should not be construed as exhaustive. Due to such uncertainties and risks, readers are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date hereof. We undertake no obligation to release publicly the result of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof, including, without limitation, changes in our business or acquisition strategy or planned capital expenditures, or to reflect the occurrence of unanticipated events.

## KEY DEFINITIONS

The following terms appearing in this Annual Report have the meanings set forth below.

| | |
|---|---|
| **EU** | means the European Union. |
| **IASB** | means the International Accounting Standards Board. |
| **IFRS** | means International Financial Reporting Standards issued by the IASB. IFRS also include all effective International Accounting Standards ( **IAS** ) and all Interpretations issued by the IFRS Interpretations committee (formerly called International Financial Reporting Interpretations Committee IFRIC), comprising those previously issued by the Standing Interpretations Committee ( **SIC** ). |
| **Ordinary Shares** | means the Ordinary Shares, of TIM. |
| **Parent, Telecom Italia, TIM and Company** | means Telecom Italia S.p.A., also named TIM S.p.A. |
| **Savings Shares** | means the Savings Shares, of TIM. |
| **TIM Group and Group** | means the Company and its consolidated subsidiaries. |
| **Vivendi** | means the Vivendi S.A. a limited liability company (*société anonyme*) incorporated under French law and subject to French commercial company law including the French commercial Code (*Code de commerce*). Vivendi S.A. is an integrated content and media group. The company operates businesses throughout the media value chain, from talent discovery to the creation, production and distribution of content. For such key definition see also below. |

* * *

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds, under Italian law, for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Subsequently, on June 25, 2018, the Board of Directors approved amendments to the internal procedure governing transactions with related parties, and updated the relative related party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the *de facto* controlling entity over TIM.

For further details, please see Item 7. Major Shareholders And Related-Party Transactions .

* * *

In addition to the foregoing terms, certain technical telecommunication terms relating to our businesses are defined in the glossary of this Annual Report (see Item 4. Information on the TIM Group 4.5 Glossary of Selected Telecommunications Terms ).

In addition, we use the measure Accesses when considering certain statistical and other data for our domestic Italian business. Access refers to a connection to any of the telecommunications services offered by the Group in Italy. The following are the main categories of accesses:

· **Physical Accesses:** in the domestic fixed telephony business, includes retail accesses, as well as wholesale accesses directly managed by TIM, excluding OLOs, for which infrastructure is fully developed, and FWA-Fixed Wireless Accesses;

· **Broadband Accesses:** in the domestic fixed telephony business, includes broadband retail accesses and broadband wholesale accesses directly managed by TIM and excludes OLO LLU and NAKED, satellite, full-infrastructured and FWA Fixed Wireless Accesses. Broadband retail accesses are included as part of physical accesses;

· **Mobile accesses:** number of lines.

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# PART I

## Item 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not Applicable

## Item 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Applicable

## Item 3. KEY INFORMATION

### 3.1 RISK FACTORS

In addition to the other information contained in this Annual Report, investors should carefully consider the risks described below before making any investment decision. The risks described below are not the only ones we face. Additional risks not known to us or that we currently deem immaterial may also impact our business and results of operations. Our business, financial condition, results of operations and cash flows could be materially adversely affected by any of these risks, and investors could lose all or part of their investment.

We present below:

1) our main objectives as set out in our 2019-2021 Strategic Plan (the **2019-2021 Plan** or the **Plan** ); and

2) factors that may prevent us from achieving our objectives. For purposes of presenting our risk factors we have identified our risks based on the main risk categories, set out in the Committee of Sponsoring Organization of the Treadway Commission[1]:

- strategic risks;
- operational risks;
- financial risks; and
- compliance risks.

***Our business will be adversely affected if we are unable to successfully implement our strategic objectives. Factors beyond our control may prevent us from successfully implementing our strategy.***

On February 21, 2019, TIM s Board of Directors approved the 2019 2021 Strategic Plan (the **Plan** ). The Plan focuses on improving TIM s execution and timely delivery of what planned as a key element for the organic transformation of TIM. The Plan provides to re-start from TIM real competitive advantages (network quality, scale and client proximity, technical competences and geographical presence) to guarantee industrial sustainability. On the Technological front, the Plan sets modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditures intensity. Quality and reliability on all customer touch points (activation, delivery and problem resolution) are as well at the center of the strategy. These strategic actions will allow to deliver a sustainable return on capital invested, to optimize invested capital and finally to delever the business.

Our ability to implement and achieve our strategic objectives and priorities may be influenced by certain factors, including factors outside of our control. Such factors include:

- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;
- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;
- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;

[1] CoSO Report-ERM Integrated Framework 2004.

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- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;

- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;

- our ability to manage any business or operating model transformation plans;

- disruptions or uncertainties resulting from the United Kingdom s expected exit from the European Union;

- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and

- the costs we incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

*As a result of these uncertainties there can be no assurance that the business and strategic objectives identified by our management can effectively be attained in the manner and within the time-frames described. Furthermore, if we are unable to attain our strategic priorities, our goodwill may be further impaired, which could result in further significant write-offs.*

*The following sets out more specific factors that may prevent us from achieving our objectives.*

**STRATEGIC RISKS**

***Weak global economic conditions, including the continuing weakness of the Italian economy and political conditions in Brazil, have adversely affected our business in recent years. After the economic recovery of 2017, the Eurozone economy has shifted from a recovery boom to an unexpected slower cruising speed. Economic conditions in the Italian economy have shown improvement, however, strong uncertainty persist with respect to the economic outlook, which could have a negative impact on our operating results and financial condition.***

Our business is dependent on general economic conditions in Italy and in our other principal market, Brazil, including with respect interest rate levels, inflation, taxation and general business conditions. The weak economic conditions of the last several years have had an adverse impact on our business and result of operation.

The prolonged economic recession that Italy has experienced in recent years has negatively impacted development prospects in our core Italian market.

After the recovery of 2017 with an economic growth of 1.6%, Italy is experiencing a slowdown even stronger than the other EMU member countries: GDP in 2018 grew by 0.9% in real terms and for 2019 an even more modest growth is expected. The slowdown in Italian growth reflects the deceleration of exports (particularly towards the main trading partner, Germany, which in turn has recorded a sharp slowdown in the third quarter) and the expected normalization of monetary policies. On the domestic side, the uncertainty associated with fiscal policy interventions and the possible repercussions on financial markets and the deteriorating of consumer and business confidence weigh significantly.

During 2018, Brazilian economy presented a lower growth than previously expected, with the GDP growth of 1.1%, according to the Brazilian Institute of Geography and Statistics ( **IBGE** ), when compared to a previous growth projection of 2.8%, at the end of 2017. This result was directly impacted by political instability due to the presidential election, that led to a historical high of the dollar exchange rate in reais (R$4.19), which, amid other factors, such as the oil price fluctuation in the international market, contributed to a strong growth of the fuel prices, one of the main factors for the 10 days truckers strike, that also contributed directly for the deceleration of Brazilian growth.

Despite that, the inflation, measured by the IPCA continued under control, at 3.75% below the minimum target set by Central Bank, but with a slight growth when compared to 2017 (2.95%). Unemployment has decreased; however, consumer and business confidence still remain sensitive to the new government s ability to approve relevant reforms to fiscal adjustment.

***Vivendi is our largest shareholder and exercises substantial influence over us.***

As of the date hereof, the largest single shareholder in the Company is Vivendi S.A. ( **Vivendi** ), which holds, directly, a stake of approximately 23.94% of ordinary share capital. With a holding of this size, Vivendi can exercise significant influence over matters subject to a vote of the ordinary shareholders of the Company, such as nominations to the Board of Directors (the **Board** ), matters involving mergers or other business combinations, the acquisition or disposition of assets, issuances of equity and the incurrence of indebtedness. In addition, Vivendi s significant holding may also have the effect of discouraging others from making tender offers for our shares. See Item 7. Major Shareholders and Related-Party Transactions 7.1 Major Shareholders .

## *Competition Risks*

***Alternative infrastructure operators in Italy could pose a threat to us, particularly in the medium to long term***

In the fixed market, alternative network operators ( **AltNet** ), such as Open Fiber S.p.A. (Open Fiber) and Infratel Italia S.p.A. (Infratel), have disclosed and started to implement plans to develop alternative ultrabroadband telecommunications networks in Italy in the main Italian cities and in so-called market failure areas. Similar alternative developments, either on a standalone basis or through partnerships with other licenced operarators ( **OLOs** ), could adversely impact our businesses, assets and goodwill and, as a consequence, our economic and financial performance. In particular, we face risks with respect to increasing competition in the National Wholesale Market, which could result in losses with respect to our customer base and revenues and a potential loss of retail market share and revenues.

***Strong competition in Italy or other countries where we operate may further reduce our core market share for telecommunications services and may cause reductions in prices and margins thereby having a material adverse effect on our results of operations and financial condition.***

Telecommunications operators have generally faced challenging market conditions in recent years, principally as a result of the decline in voice traffic and significant pricing pressures resulting from increased competition among operators.

Strong competition exists in all principal areas of the Italian telecommunications business in which we operate. Competition may become even more acute in the coming years, with additional international operators accessing the Italian market.

The Italian telecommunications market is experiencing a phase of heating of the competitive environment, mainly due to the entry of Iliad in the mobile market as the 4th network infrastructured operator. Iliad launched its mobile service in the Italian market at the end of May 2018 and has rapidly gained customers and consequently market share to the detriment of the other infrastructured operators, thanks to a simplified offer particularly aggressive in terms of price and volume of data. The other operators followed Iliad reducing prices and largely increasing GB allowance with an impact not only on the mobile sector with the explosion of overall MNP exchange and ARPU dilution, but also on the fixed, generating a price war to recover customer base lost on Mobile.

Moreover, convergence has enabled lateral competition from Information Technology (or IT), over-the-top ( **OTT** ), Media and Devices/Consumer Electronic players. This competition may further increase due to globalization and the consolidation of the telecommunications industry in Europe, including Italy, and elsewhere.

The emergence of alternative infrastructure operators could also pose a threat to us, particularly in the medium to long term.

Competition in our principal lines of business has led, and could lead, to:

- price and margin erosion for our traditional products and services;
- loss of market share in our core markets;
- loss of existing or prospective customers; and
- greater difficulty in retaining existing customers.

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In addition, competition with respect to innovative products and services in our Italian domestic fixed-line, mobile telephony and broadband/ultrabroadband businesses, has led, and could lead to:

- obsolescence of existing technologies and more rapid deployment of new technologies;
- an increase in costs and payback period related to investments in new technologies that are necessary to retain customers and market share; and
- difficulties in reducing debt and funding strategic and technological investments if we cannot generate sufficient profits and cash flows.

Although we continue to take steps to realize additional efficiencies and to rebalance our revenue mix through the continuous introduction of innovative and value-added services, if any or all of the events described above occur, the impact of such factors could have a material adverse effect on our results of operations and financial condition.

***Continuing rapid changes in technologies could increase competition, reduce usage of traditional services and require us to make substantial additional investments.***

We, like other operators, face increasing competition from non-traditional data services on new voice and messaging over-the-internet technologies, in particular OTT applications such as Skype, FaceTime, Messenger and WhatsApp. These applications are often free of charge, other than charges for data usage and are accessible via smartphones, tablets and computers. These applications provide users with potentially unlimited access to messaging and voice services over the internet, bypassing more expensive traditional voice and messaging services, such as SMS, which have historically been a source of significant revenues for fixed and mobile network operators like TIM. In Italy and Brazil, an increasing number of customers are using OTT applications services instead of traditional voice and SMS communications.

Historically, we have generated a substantial portion of our revenues from voice and SMS services, particularly in our mobile business in Italy, and the substitution of data services for these traditional voice and SMS volumes has had and could continue to have a negative impact on our revenues and profitability.

If non-traditional voice and messaging data services continue to increase in popularity, as they are expected to, and we are unable to address such competition, our average revenue per user ( **ARPU** ) could decline and we would face lower margins across many of our products and services, resulting in a material adverse effect on our business, results of operations, financial condition and prospects.

***We may be adversely affected if we fail to successfully implement our Internet and broadband/fiber/4.5G/5G NGNM strategy.***

The continuing development of Internet and broadband/fiber services constitutes a strategic objective for us. We aim to increase the use of our networks in Italy and abroad to offset the continuing decline of traditional voice services. Our ability to successfully implement this strategy may be negatively affected if:

- broadband/fiber mobile coverage does not grow as we expect;

- competition grows to include players from adjacent markets or technological developments introducing new platforms for Internet access and/or Internet distribution;

- we are unable to provide superior broadband/fiber connections and broadband/mobile services relative to our competitors;

- we experience network interruptions or related capacity problems with network infrastructure; and

- we are unable to obtain adequate returns from the investments related to our network development.

However, implementation of 4.5G/5G ultrabroadband mobile technologies is dependent on a number of factors including the following:

- availability and selection of cutting edge technology from our network/platforms and device vendors.

If we fail to achieve our objectives for the implementation of ultrabroadband mobile coverage in a timely manner, or at all, we may lose market share to our competitors in this strategically important segment.

Any of the above factors may adversely affect the successful implementation of our strategy, our business and results of operations.

***Our business may be adversely affected if we fail to successfully implement our Information and Communications Technology (ICT) strategy.***

We intend to continue focusing on Information Technology-Telecommunication ( **IT-TLC** ) convergence by addressing the ICT market, offering network and infrastructure management, as well as application management. In particular, as the market for cloud services continues to grow, the ICT market is expected to become a key element of our strategy.

We expect increasing competition in this market as additional competitors (mainly from telecommunications operators, through the acquisition of and partnerships with IT operators) also enter this market. If we fail to grow our market share or compete effectively, our revenues could be negatively affected.

***Our business may be adversely affected if we fail to successfully implement our next-generation networks strategy.***

One of our goals is to accelerate the roll-out of a new telecommunications network capable of providing customers with ultrabroadband connections, generally referred to as a next-generation network ( **NGN** ).

However, implementation of ultrabroadband technologies is dependent on a number of factors including:

- delays in receiving the necessary permissions and authorizations for installation of NGN lines;
- resistance by road administrators to the use of innovative techniques for excavation and the laying fiber optic cables;
- delay in the operation of SINFI (Sistema Informativo Nazionale Federato delle Infrastrutture).

In areas not provided for under our development plan or where implementation of the ultrabroadband plan is conditioned upon the grant of public funds, in addition to those listed above, the following factors should be considered:

- allocation of public funds at the local level;

- fulfillment of technical and economic conditions related to the EuroSUD (a European funding telematic counter) tenders awarded to us; and

- the awarding of tenders for the grant of public funds, which unduly penalize TIM by setting wholesale prices considerably lower than the regulated prices applicable to TIM s similar services which are set in its Reference Offer as approved by AGCom.

If we fail to achieve our objectives for the implementation of ultrabroadband coverage in a timely manner, or at all, we may lose market share to our competitors in this strategically important segment, which may adversely impact our business, financial condition and results of operations.

***<u>We are subject to risks associated with political developments in countries where we operate</u>***

Changes in political conditions in Italy and in other countries where we have made significant investments (particularly in countries where the political situation is less predictable than in Western Europe) may have an adverse effect upon our business, financial condition, results of operations and cash flows.

***The Italian government has exercised, and may in the future exercise, its significant powers with respect to us, including with respect to our ability to enter into strategic transactions***

In 2012, regulations relating to the special powers regarding strategic assets in the energy, transport and communications sectors were published and became effective (Law Decree n. 21 of March 15, 2012, adopted with modifications by Law n. 56 of May 11, 2012: the Golden Power Decree ).

Article 1 of the Golden Power Decree (which refers to assets strategic for the defense and national security sector) grants the Italian Government:

- the power to impose conditions and possibly to oppose the purchase of shareholdings by parties other than the Italian State, Italian public entities and other parties controlled by the same, so long as the stake is sufficient to compromise the interests of national defence and security. Until expiry of the period of time within which conditions may be imposed, or the power to oppose the acquisition exercised, any rights other than ownership rights connected to the relevant shares are suspended. Such rights are suspended in case of non-compliance with or breach of any condition imposed on the purchaser, for as long as the non-compliance or breach persists. Any shareholders resolution adopted with the relevant shares providing the decisive votes, as well as any resolution or act adopted that breaches or does not comply with any condition imposed, is null and void;

- veto power (including through the imposition of obligations or conditions) regarding any resolution (by either the shareholders meeting or the administrative bodies of the company) on any merger, demerger, transfer of business unit, relocation of registered office to outside Italy, change of the corporate purpose or winding up of the company. Any resolution or act adopted in breach of these obligations is null and void. The Government may also order the Company and any other party to restore the original condition.

Article 2 of the Golden Power Decree (which refers to strategic assets in the communications sector) grants the Italian Government:

- the power to impose conditions and possibly oppose the purchase, under certain conditions, by non-EU entities, of controlling stakes in companies that hold the aforementioned types of assets. Until the end of a 15-day period from the notice of such purchase, during which the Government may impose conditions or oppose the proposed purchase, voting rights (and any rights other than the property rights) connected to shares resulting in the change of control, are suspended. Such rights are suspended in the case of any non-compliance with or breach of the conditions imposed on the purchaser for as long as the non-compliance or breach persists. Any shareholders resolution adopted with the relevant shares providing the decisive votes, as well as any resolution or act adopted that breaches or does not comply with any condition imposed, is null and void;

- veto power (including through the imposition of obligations or conditions) regarding any resolution, act or transaction that has the effect of modifying the ownership, control or availability of such strategic assets or changing their location, including resolutions on any merger, demerger, transfer of registered office to outside Italy, transfer of the company or a business unit which contains the strategic assets, or their assignment by way of guarantee. Any resolution or act in breach of such obligations is null and void. The Government may also order the company and any other party to restore the original condition at its own expense.

In October and November 2017, the Government designated certain of the Company s assets as strategic within the meaning of the above-described provisions of the Golden Power Decree and imposed various governance and organizational obligations and restrictions on the Company. This and any future exercise of the Government s powers under the Golden Power Decree, or the mere existence of such powers, could:

- adversely affect the Company s ability to conduct its business (including, for example, by limiting the Company s ability to dispose of assets designated as strategic); and

- make a change of control transaction with respect to TIM (whether by merger or otherwise) more difficult to achieve, if at all, or discourage bidders from making an offer relating to a change of control that could otherwise be beneficial to shareholders.

**OPERATIONAL RISKS**

We face numerous risks with respect to the efficiency and effectiveness of resource allocation. Operational risks related to our business, include those resulting from inadequate internal and external processes, fraud, employee errors, failure to document transactions properly, loss or disclosure of critical or commercial sensitive data or personal identification information and systems failures. These events could result in direct or indirect losses and adverse legal and regulatory proceedings, and could harm our reputation and operational effectiveness.

We have in place risk management procedures designed to detect, manage and monitor at a senior level the evolution of these operational risks. However, there is no guarantee that these measures will be successful in effectively controlling the operational risks that we face and such failures could have a material adverse effect on our results of operations and could harm our reputation.

***System and network failures could result in reduced user traffic and reduced revenue and could harm our reputation. In addition, our operations and reputation could be materially negatively affected by cyber-security threats or our failure to comply with new data protection legislation UE 2016/679 General Data Protection Regulation (GDPR), of which implementation was mandatory by May 25, 2018.***

We have executed a deep gap analysis, identified the main issues, and consequently planned and deployed a master plan to reach a full compliance with new General Data Protection Regulation 2016/679/EU (GDPR) requirements, facilitated by the strength of present data protection operative model adopted by the Company. However, deficiencies in full adoption of data security measures, implementing personal data processing and retention requirements and reporting data measures within a narrow mandatory timeframe could lead to disputes with data protection authorities, fines or harm to our reputation.

Our success largely depends on the continued and uninterrupted performance of our IT, network systems and of certain hardware and datacenters that we manage for our clients. Our technical infrastructure (including our network infrastructure for fixed-line and mobile telecommunications services) is vulnerable to damage or interruption from technology failures, power loss, floods, windstorms, fires, terrorism, intentional wrongdoing, human error and similar events. Unanticipated problems at our facilities, system failures, hardware and software failures, computer viruses and hacker attacks, as well as terrorist attacks against our infrastructure, which remains a target, could affect the quality of our services and cause service interruptions. Any of these occurrences could result in reduced user traffic and reduced revenue and could negatively affect our levels of customer satisfaction, reduce our customer base and harm our reputation. In addition, our operations involve daily processing and storage of large amounts of customer data and require uninterrupted, accurate, permanently available, real-time and safe transmission and storage of customer and other data in compliance with applicable laws and regulations. The proper functioning of, including prevention of unauthorized access to, our networks, systems, computers, applications and data, such as customer accounting, network control, data hosting, cloud computing and other information technology systems is critical to our operations. We may be held liable for the loss, release, disclosure or inappropriate modification of the customer data stored on our equipment or carried by our networks. IT system failure, interruption of service availability, industrial espionage, cyber-attack or data leakage, in particular relating to customer data, could seriously limit our ability to service our clients, result in significant compensation costs for which indemnification or insurance coverage may be only partially available, result in a breach of laws and regulations under which we operate or lead to fines and could cause long-term damage to our business and reputation.

***Our business depends on the upgrading of our existing networks.***

We must continue to maintain, improve and upgrade our existing networks in a timely and satisfactory manner in order to retain and expand our customer base in each of our markets. A reliable and high quality network is necessary to manage turnover by sustaining our customer base, to maintain strong customer brands and reputation and to satisfy regulatory requirements, including minimum service requirements. The maintenance and improvement of our existing networks depends on our ability to:

- upgrade the functionality of our networks to offer increasingly customized services to our customers;
- increase coverage in some of our markets;
- expand and maintain customer service, network management and administrative systems;
- expand the capacity of our existing fixed copper and mobile networks to cope with increased bandwidth usage; and
- upgrade older systems and networks to adapt them to new technologies.

In addition, due to rapid changes in the telecommunications industry, our network investments may prove to be inadequate or may be superseded by new technological changes. Our network investments may also be limited by market uptake and customer acceptance. If we fail to make adequate capital expenditures or investments, or to properly and efficiently allocate such expenditures or investments, the performance of our networks, both in real terms and relative to our competitors, could suffer, resulting in lower customer satisfaction, diminution of brand strength and increased turnover.

Many of these tasks are not entirely under our control and may be affected by applicable regulation. If we fail to maintain, improve or upgrade our networks, our services and products may be less attractive to new customers and we may lose existing customers to competitors, which could have a material adverse effect on our business, financial condition and results of operations.

***We are continuously involved in disputes and litigation with regulators, competition authorities, competitors and other parties and are the subject of a number of investigations by judicial authorities. The ultimate outcome of such proceedings is generally uncertain. If any of these matters are resolved against us, they could, individually or in the aggregate, have a material adverse effect on our results of operations, financial condition and cash flows in any particular period.***

We are subject to numerous risks relating to legal, tax, competition and regulatory proceedings in which we are currently a party or which could develop in the future. We are also the subject of a number of investigations by judicial authorities. Such proceedings and investigations are inherently unpredictable. Legal, tax, competition and regulatory proceedings and investigations in which we are, or may become, involved (or settlements thereof) may, individually or in the aggregate, have a material adverse effect on our results of operations and/or financial condition and cash flows in any particular period. Furthermore, our involvement in such proceedings and investigations may adversely affect our reputation.

If we, or another Group company, face an adverse decision in any of the legal proceedings to which we are a party, and are ordered to pay amounts greater than what we have recognized to cover potential liabilities, we may face adverse effects with respect to our and/or our Group s operations, financial position, income statement and cash flows.

The final outcomes of those proceedings are generally uncertain. As of December 31, 2018, we had, on a consolidated basis, recognized potential liabilities of 508 million euros. In recognizing these liabilities, we took into consideration the risks connected with each dispute and the relevant accounting standards, which require reserves to be recognized where liabilities are probable and can be estimated reliably. The provisions represent an estimate of the financial risk connected with the particular proceedings, in line with the relevant accounting standards. Nonetheless, we may be obligated to meet liabilities linked to unsuccessful outcomes for proceedings that were not taken into consideration when calculating those reserves and the provisions made may not be sufficient to fully meet such obligations through use of our reserves. Such a development could have adverse effects on our business, financial position, results of operations and cash flows.

***Risks associated with the use of internet by our customers could cause us to suffer losses and adversely affect our reputation.***

Pursuant to applicable Italian regulation, we, as a host and provider of data transmission services, are required to inform competent authorities without delay of any alleged illegal or illicit activity by our customers of which we are aware. We must also provide the authorities with any information we have identifying such customers. Any failure to comply with this obligation could cause us to become involved in civil proceedings or could harm public perception of our brand and services. Any such event could result in legal and/or regulatory proceedings, make us subject to direct or indirect monetary losses and could materially harm our reputation.

***We are exposed to the risk of labor disputes, in particular as a result of our plan to restructure our labor costs.***

We have undertaken a restructuring of various aspects of our workforce in an effort to improve standards of service and expertise and achieve greater efficiency and reduce personnel costs.

To that end, we have subscribed a new union agreement on June 11, 2018 at Labor Minister, where parties defined the path and a set of measures to manage the staff and support the 2018-2020 Strategic Plan.

The Agreement of June 11, 2018 concluded the complex process and the CIGS procedure, during the joint examination sessions pursuant to article 24 of Italian Legislative Decree no. 148/2015, with the signing of an agreement with the Ministry of Labor and Social Policy, which set out a series of measures and interventions geared at supporting the pursuit of the business objectives and management of the 4,500 declared redundancies in connection with the 2018-2020 Industrial Plan, which was approved by the Board of Directors on March 6, 2018, with non-traumatic, socially sustainable instruments.

Negotiations related to the Company Collective Bargaining Agreement are ongoing. See Item 6 Directors, Senior Management and Employees 6.5.2 Industrial Relation for further details.

Relations between us and our workers/trade unions are not generally adversarial and strikes or protests involving a majority of workers are not common, however, such occurrences carry a moderate risk of disruptions in work and/or reduced service. Generally, such occurrences would be expected negatively impact our customers, our business and our reputation.

**FINANCIAL RISKS**

***Our leverage is such that deterioration in cash flow can change the expectations of our ability to repay our debt and the inability to reduce our debt could have a material adverse effect on our business. Continuing volatility in international credit markets may limit our ability to refinance our financial debt.***

As of December 31, 2018, our consolidated gross financial debt was 30,972 million euros, compared to 32,864 million euros on December 31, 2017. Our consolidated net financial debt was 25,995 million euros as of December 31, 2018, compared to 26,091 million euros on December 31, 2017. Our high leverage continues to be a factor in our strategic decisions as it has been for a number of years and the reduction of our leverage remains a key strategic objective. As a result, however, we are reliant on cost-cutting and free cash flow to finance critical technology improvements and upgrades to our network, although we are taking steps to raise additional capital to support critical investment.

Due to the competitive environment and the continuing weak economic conditions, there could be deterioration in our income statement and financial measures used by rating agencies, such as Moody s, Standard & Poor s and Fitch, to assess our ability to repay our debt and determine our credit quality.

Although rating downgrades do not generally have an immediate impact on outstanding debt, other than outstanding debt instruments for which the interest expense is specifically impacted by such ratings, downgrades could adversely impact our ability to refinance existing debt and could increase costs related to refinancing existing debt and managing our derivatives portfolio.

Factors that are beyond our control such as deterioration in the telecommunications sector, unfavorable fluctuations in interest rates and/or exchange rates, further disruptions in the capital markets, particularly debt capital markets and continuing weakness in general economic conditions at the national level could have a significant effect on our ability to reduce our debt and refinance existing debt through further access to the financial markets. Because debt reduction is one of our strategic objectives, failure to reduce debt could be viewed negatively and could adversely affect our credit ratings.

The management and development of our business will require us to make significant further capital and other investments. If we are unable to finance our capital investments as described above, we may need to incur additional debt in order to finance such investment. Our future results of operations may be influenced by our ability to enter into such transactions, which, in turn, will be determined by market conditions and factors that are outside our control. In addition, if such transactions increase our leverage, it could adversely affect our credit ratings.

***Fluctuations in currency exchange and interest rates and the performance of the equity markets in general may adversely affect our results.***

In the past, we have made substantial international investments, significantly expanding our operations outside of the Euro zone, particularly in Latin America.

Our non-current operating assets are located as follows:

- Italy: as of December 31, 2018 and December 31, 2017, respectively, 47,795 million euros (88.4 percent of total non-current operating assets) and 48,591 million euros (87.4 percent of total non-current operating assets); and

- Outside of Italy: as of December 31, 2018 and December 31, 2017, respectively, 6,300 million euros (11.6 percent of total non-current operating assets) and 7,032 million euros (12.6 percent of total non-current operating assets). Non-current operating assets outside of Italy are primarily denominated in Brazilian Reais.

We generally hedge our foreign exchange exposure but do not cover conversion risk relating to our foreign subsidiaries. According to our policies, the hedging of the foreign exchange exposure related to the financial liabilities is mandatory. Movements in the euro exchange relative to other currencies (particularly the Brazilian Real) may adversely affect our consolidated results. A rise in the value of the euro relative to other currencies in certain countries in which we operate or have made investments will reduce the relative value of the revenues or assets of our operations from those countries and, therefore, may adversely affect our operating results or financial position.

In addition, we have raised, and may raise an increasing proportion, financing in currencies other than the euro, principally U.S. dollars and British pound sterling. In accordance with our risk management policies, we generally hedge the foreign currency risk exposure related to non-euro denominated liabilities, through cross-currency and interest rate swaps.

Furthermore, we are exposed to interest rates risk on that portion of our consolidated gross debt which is subject to the accrual of interest at floating rates; that represents 29 percent both as of December 2018 and 2017.

The decision to keep such a fixed floating rate debt structure goes towards the goal to minimize negative interests impact and is partially implemented through derivatives instruments whereby fixed rate liabilities are synthetically converted in floating rate ones. As of December 31, 2018, and December 31, 2017, we had derivative contracts in place for the sole management of our interest rate risk, including interest rate swaps, for notional amounts of 4,334 million euros. Any changes in interest rates that have not been adequately hedged by derivative contracts may result in increased financial liabilities in connection with our floating rate debt, which may have adverse effects on the results of our operations and cash flows.

An increase of sovereign spreads, and of the default risk they reflect, in the countries where we operate, may affect the value of our assets in such countries.

We may also be exposed to financial risks such as those related to the performance of the equity markets in general, and, more specifically, risks related to the performance of the share price of Group companies.

The potential impact of the UK s departure from the EU ( **Brexit** ) will depend on negotiations on the separation agreement with the EU, the outcome of which remains uncertain, after the House of Commons rejected the separation plan backed by the UK Prime Minister in March 2019.

Brexit and possible outcomes of the exit negotiations could cause further instability in the global and European financial markets already made delicate by the trade dispute between USA and China.

The potential effects of Brexit could negatively affect our financial condition, our business, and the related economic results and cash flows.

## COMPLIANCE RISKS

***Because we operate in a heavily regulated industry, regulatory decisions and changes in the regulatory environment could adversely affect our business.***

Our fixed and mobile telecommunications operations, in Italy and abroad, are subject to regulatory requirements. As a member of the EU, Italy has adapted its regulatory legislation and rules for electronic communications services to the framework established by the EU Parliament and Council.

Pursuant to the EU regulatory framework, the Italian regulator, Autorità per le Garanzie nelle Comunicazioni ( **AGCom** ), is required to identify operators with Significant Market Power ( **SMP** ) in the relevant markets subject to regulation. On the basis of market analyses proceedings (Market Analyses), AGCom imposes requirements necessary to address identified competition problems. Current requirements are mainly focused on the regulation of our wholesale business, while the regulation of retail markets has been largely withdrawn, with the exception of price tests on retail access offers (for telephone, broadband and ultrabroadband services).

Within this regulatory framework, the main risks we face include the lack of predictability concerning both the timing of the regulatory proceedings and their final outcome and possible AGCom decisions that apply retroactively and their potential impact on expected Group results and on the guidance presented to the market (e.g., review of prices from prior years following the decisions of Administrative Courts, repricing decisions, proceedings that impact technological decisions and return on investment).

In principle, a new round of Market Analyses should be conducted by AGCom every three years, in order to deal with the evolution of market conditions and technology developments and set the rules for the subsequent three-year period. However, the regulatory review process does not always follow the expected schedule.

Regulation is a key factor in evaluating the likelihood of return on investments and therefore in deciding where to invest. Regulatory uncertainty and regulatory changes imposed on us can impact our revenues and can make it more difficult to make important investment decisions.

Moreover, a high level of disputes arising from operators challenging AGCom decisions before Administrative Courts result in an even greater degree of uncertainty with respect to rules and economic requirements.

The Italian Antitrust Authority, *Autorità Garante per la Concorrenza ed il Mercato* ( **AGCM** ), may also intervene in our business, setting fines and/or imposing changes in our service provision operating processes and in our offers.

Our Brazilian Business Unit also is subject to extensive regulation. Our international operations, therefore, face similar regulatory issues as we face in Italy, including the possibility for regulators to impose obligations and conditions on how we operate our businesses in Brazil as well as taking decisions that can have an adverse effect on our results, including setting, and in particular, reducing the mobile termination rates we can charge. As a result, the decisions of regulators or the implementation of new regulations in Brazil and the costs of our compliance with any such decisions or new regulations, may limit our flexibility in responding to market conditions, competition and changes in our cost base which could individually or in the aggregate, have a material adverse effect on our business and results of operations.

Due to the continuous evolution of the regulatory regime affecting various parts of our business in Italy and in our international operations, we are unable to clearly predict the impact of any proposed or potential changes in the regulatory environment in which we operate in Italy, Brazil and our other international markets. Regulations in the telecommunications industry are constantly changing to adapt to new competition and technology. Changes in laws, regulation or government policy could adversely affect our business and competitiveness. In particular, our ability to compete effectively in our existing or new markets could be adversely affected if regulators decide to expand the restrictions and obligations to which we are subject or extend them to new services and markets. Finally, decisions by regulators regarding the granting, amendment or renewal of our authorizations, or those of third parties, could adversely affect our future operations in Italy and in other countries where we operate.

For further information regarding the matters discussed above and other aspects of the regulatory environments in which our businesses operate, see Item 4. Information on the TIM Group Item 4.3 Regulation .

***We operate under authorizations granted by government authorities.***

Many of our activities require authorizations from governmental authorities both in Italy and abroad. These authorizations specify the types of services the operating company holding such authorization may provide. The continued existence and terms of our authorizations are subject to review by regulatory authorities and to interpretation, modification or termination by these authorities. Although authorization renewal is not usually guaranteed, most authorizations do address the renewal process and terms that may be affected by political and regulatory factors.

Many of these authorizations are revocable for public interest reasons. In addition, our current authorizations to provide networks and services require that we satisfy certain obligations, including minimum specified quality levels, service and coverage conditions. Failure to comply with these obligations could result in the imposition of fines or even in the revocation or forfeiture of the authorization. In addition, the need to meet scheduled deadlines may require us to expend more resources than otherwise budgeted for a particular network build-out.

Additional authorizations may also be required if we expand our services into new product areas, and such authorizations may be related to auctions (e.g., in the assignment of spectrum right of use) or otherwise prove expensive or require significant cash outlays, or have certain terms and conditions, such as requirements related to coverage and pricing, with which we may not have previously had to comply. If we are unable to obtain such authorizations within the expected timeframe, at a commercially acceptable cost, or if the authorizations include onerous conditions, it could have a material adverse effect on our business, financial condition and results of operations.

In Brazil we also operate under an authorizations regime. As a result, we are obliged to maintain minimum quality and service standards. Our failure to comply with the requirements imposed by Regulatory Agency for Telecommunications Agencia Nacional de Telecomunicacoes ( **ANATEL** ) and by the Brazilian Government may result in the imposition of fines or other government actions, including the suspension of the service commercialization for a given period.

***Actual or perceived health risks or other problems relating to mobile handsets or transmission masts could lead to litigation or decreased mobile communications usage.***

The effects of, and any damage caused by, exposure to an electromagnetic field were and are the subject of careful evaluations by the international scientific community, but until now there is no scientific evidence of harmful effects on health. We cannot rule out that exposure to electromagnetic fields or other emissions originating from wireless handsets will not be identified as a health risk in the future.

Our mobile communications business may be harmed as a result of these alleged health risks. For example, the perception of these health risks could result in a lower number of customers, reduced usage per customer or potential consumer liability. In addition, although Italian law already imposes strict limits in relation to transmission equipment, these concerns may cause regulators to impose greater restrictions on the construction of radio base station towers or other infrastructure, which may hinder the completion of network build-outs and the commercial availability of new services and may require additional investments.

***We face the risk that our organizational policies and procedures embodied in the organizational model prepared pursuant to Legislative Decree 231/2001 may fail to prevent certain officers and employees from engaging in unlawful conduct, for which we would be jointly liable.***

We have put in place an organizational model pursuant to Legislative Decree 231/2001, in order to create a system of rules capable of preventing certain forms of unlawful conduct by senior management, executives and employees generally that might result in liabilities for us. The organizational model has been adopted by us and by our Italian subsidiaries. A specific version of the organizational model has been adopted by TIM Participacoes pursuant to the anti-corruption Brazilian law (Lei 12.846/13).

The organizational model is continuously reviewed and must be kept up to date to reflect changes in operations and in the regulatory environment. We have established a 231 steering committee to prepare and consider proposals for changes to the model, for submission to the Board for approval.

Notwithstanding the existence of this model or any updates that we may make to it, there can be no assurances that the model will function as designed, or that it will be considered adequate by any relevant legal authority. If the model is inadequate or deemed to be so, and we were held liable for acts committed by our senior management, executives and employees or are found otherwise non-compliant with the requirements of the legislation, we may be ordered to pay a fine, our authorizations, licenses or concessions may be suspended or revoked, and we may be prohibited from conducting business, contracting with the Italian public administration, or advertising goods and services. Such developments would have adverse effects on our business, results of operations, financial condition and cash flows.

## 3.2 EXCHANGE RATES

We publish our consolidated financial statements in euros. References to , euro and Euro are to the euro, the sing unified currency that was introduced in Italy and 10 other member states of the EU on January 1, 1999. References to U.S. dollars , dollars , U.S.$ or $ are to U.S. dollars, the currency of the United States of America.

For convenience only (except where noted otherwise), certain euro figures have been translated into dollars at the rate (the Euro/Dollar Exchange Rate ) of 1.00= U.S.$ 1.1456, using the last noon buying rate in The City of New York for cable transfers in foreign currencies as announced by the Federal Reserve Bank of New York for customs purposes (the **Noon Buying Rate** ) on December 31, 2018.

These translations should not be construed as a representation that the euro amounts actually represent such dollar amounts or have been or could be converted into dollars at the rate indicated.

For the purpose of this Annual Report, billion means a thousand million.

The Ordinary Shares (the **Ordinary Shares** ) and Savings Shares (the **Savings Shares** ) of TIM trade on *Mercato Telematico Azionario* ( **Telematico** ), managed by Borsa Italiana S.p.A. ( **Borsa Italiana** ) in euro. Fluctuations in the exchange rate between the euro and the U.S. dollar will affect the U.S. dollar equivalent of the euro price of the Ordinary Shares and the Savings Shares and the price of the Ordinary Share American Depositary Shares ( **Ordinary Share ADSs** ) and the Savings Share American Depositary Shares ( **Savings Share ADSs** ), on the New York Stock Exchange ( **NYSE** ). Cash dividends are paid in euro. Exchange rate fluctuations will affect the U.S. dollar amounts received by owners of Ordinary Share ADSs and Savings Share ADSs upon conversion by the Depositary of cash dividends paid in euro on the underlying Ordinary Shares and Savings Shares. See Item 10. Additional Information 10.5 Description of American Depositary Receipts .

### 3.3 SELECTED FINANCIAL AND STATISTICAL INFORMATION

The selected financial data set forth below are consolidated financial data of the TIM Group as of and for each of the years ended December 31, 2018, 2017, 2016, 2015 and 2014, which have been extracted or derived, with the exception of amounts presented in U.S. dollars, financial ratios and statistical data, from the Consolidated Financial Statements of the TIM Group prepared in accordance with IFRS as issued by IASB and which have been audited by the independent auditor PricewaterhouseCoopers S.p.A.

In 2018, the Group applied the accounting policies on a basis consistent with those of the previous years, except for the new standards and interpretations adopted by the Group since January 1, 2018, the impact of which is illustrated under *Adoption of the new IFRS 9 and IFRS 15 standards* described in the Note Accounting Polices of the Notes to the Consolidated Financial Statements included elsewhere herein.

The selected financial data below should be read in conjunction with the Consolidated Financial Statements and notes thereto included elsewhere in this Annual Report.

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**Item 3. Key Information** **Selected Financial And Statistical Information**

| | 2018 | 2018(*) | 2017(*) | 2016(*)(**) | 2015(*)(**) | 2014(*)(**) |
|---|---|---|---|---|---|---|
| | (millions of U.S. dollars, except percentages, ratios, employees and per share amounts)(1) | Year ended December 31, (millions of euros, except percentages, ratios, employees and per share amounts) | | | | |
| **Separate Consolidated Income Statement Data:** | | | | | | |
| **Revenues** | **21,698** | **18,940** | **19,828** | **19,025** | **19,719** | **21,574** |
| **Operating profit (loss)** | **643** | **561** | **3,291** | **3,722** | **2,963** | **4,529** |
| **Profit (loss) before tax from continuing operations** | **(890)** | **(777)** | **1,777** | **2,799** | **453** | **2,350** |
| **Profit (loss) from continuing operations** | **(1,320)** | **(1,152)** | **1,287** | **1,919** | **50** | **1,420** |
| Profit (loss) from Discontinued operations/Non-current assets held for sale | | | | 47 | 611 | 541 |
| **Profit (loss) for the year** | **(1,320)** | **(1,152)** | **1,287** | **1,966** | **661** | **1,961** |
| *Profit (loss) for the year attributable to Owners of the Parent (2)* | *(1,616)* | *(1,411)* | *1,121* | *1,808* | *(70)* | *1,351* |
| **Capital Expenditures** | **7,341** | **6,408** | **5,701** | **4,876** | **5,197** | **4,984** |
| **Financial Ratios:** | | | | | | |
| Operating profit (loss)/Revenues (ROS)(%) | 3.0% | 3.0% | 16.6% | 19.6% | 15.0% | 21.0% |
| **Employees, average salaried workforce in the Group, including personnel with temporary work contracts:** | | | | | | |
| Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current | 54,423 | 54,423 | 54,946 | 57,855 | 61,553 | 59,285 |

| | | | | | | |
|---|---|---|---|---|---|---|
| assets held for sale) (average number) | | | | | | |
| Employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale (average number) | | | | 2,581 | 15,465 | 15,652 |
| **Basic and Diluted earnings per Share (EPS)(3):** | | | | | | |
| **Ordinary Share** | **(0.08)** | **(0.07)** | **0.05** | **0.08** | **0.06** | **(0.03)** |
| **Savings Share** | **(0.08)** | **(0.07)** | **0.06** | **0.09** | **0.07** | **(0.03)** |
| **Dividends:** | | | | | | |
| per Ordinary Share (4) | | | | | | |
| per Saving Share (4) | 0.032 | 0.0275 | 0.0275 | 0.0275 | 0.0275 | 0.0275 |

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**Item 3. Key Information** **Selected Financial And Statistical Information**

| | 2018 (millions of U.S. dollars, except employees)(1) | 2018(*) | 2017(*) | 2016(*) | 2015(*) | 2014(*) |
|---|---|---|---|---|---|---|
| | | As of December 31, (millions of euros, except employees) | | | | |
| **Consolidated Statement of Financial Position Data:** | | | | | | |
| **Total Assets** | **75,173** | **65,619** | **68,783** | **70,446** | **71,268** | **71,596** |
| **Equity:** | | | | | | |
| Equity attributable to owners of the Parent | 22,371 | 19,528 | 21,557 | 21,207 | 17,554 | 18,068 |
| Non-controlling interests | 2,542 | 2,219 | 2,226 | 2,346 | 3,695 | 3,516 |
| **Total Equity** | **24,913** | **21,747** | **23,783** | **23,553** | **21,249** | **21,584** |
| **Total Liabilities** | **50,260** | **43,872** | **45,000** | **46,893** | **50,019** | **50,012** |
| **Total Equity and liabilities** | **75,173** | **65,619** | **68,783** | **70,446** | **71,268** | **71,596** |
| **Share capital (5)** | **13,274** | **11,587** | **11,587** | **11,587** | **10,650** | **10,634** |
| **Net financial debt (6)** | **29,780** | **25,995** | **26,091** | **25,955** | **28,475** | **28,021** |
| **Employees, number in the Group at year-end, including personnel with temporary work contracts:** | | | | | | |
| Employees (excluding employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale) (number at year-end) | 57,901 | 57,901 | 59,429 | 61,229 | 65,867 | 66,025 |
| Employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale (number at year-end) | | | | | 16,228 | 16,420 |

| | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|
| | As of December 31, (thousands) | | | | |
| **Statistical Data:** | | | | | |
| **Domestic (Italy) Business Unit** | | | | | |
| Physical accesses (7) | 18,212 | 18,995 | 18,963 | 19,209 | 19,704 |
| *Of which physical accesses (retail)* | *10,149* | *11,044* | *11,285* | *11,742* | *12,480* |

| | | | | | |
|---|---|---|---|---|---|
| Broadband accesses | 11,184 | 10,154 | 9,206 | 8,890 | 8,750 |
| *Of which retail broadband accesses* | *7,575* | *7,641* | *7,191* | *7,023* | *6,921* |
| Mobile lines | 31,818 | 30,755 | 29,617 | 30,007 | 30,350 |
| **Brazil Business Unit** | | | | | |
| Mobile lines | 55,923 | 58,634 | 63,418 | 66,234 | 75,721 |

(*) Starting from January 1, 2018, the TIM Group adopted IFRS 9 (*Financial Instruments*) retroactively, using the specific exemptions provided for by the same standard and without the restatement of the previous periods compared, as well as IFRS 15 (*Revenues from contracts with customers*) using the simplified retrospective method. Consequently, the economic and financial data for previous years have not been restated. Furthermore, as permitted by IFRS 9, TIM Group has chosen to continue to apply the hedge accounting requirements of IAS 39, instead of the requirements of IFRS 9. For further details, reference should be made to the Note Accounting principles of the Notes to the Consolidated Financial Statements included elsewhere herein.

(**) On November 13, 2013, TIM accepted the offer of Fintech Group to acquire the entire controlling interest of TIM Group in the Sofora Telecom Argentina group. The agreements made in connection with this transaction were subsequently modified in October 2014. As a result, and in accordance with IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations), starting with the fourth quarter of 2013, the Sofora Telecom Argentina group has been treated as Discontinued operations/Non-current assets held for sale. On March 8, 2016, the TIM Group completed the sale of Sofora Telecom Argentina group.

**Item 3. Key Information** **Selected Financial And Statistical Information**

(1) For the convenience of the reader, Euro amounts for 2018 have been converted into U.S. dollars using the Euro/Dollar Exchange Rate in effect on December 31, 2018 of 1.00 = 1.1456 U.S.$.

(2) For the purposes of IFRS, Parent , as used in this Annual Report, means TIM S.p.A.

(3) In accordance with IAS 33 (Earnings per share), basic earnings per Ordinary Share is calculated by dividing the Group s profit (loss) available to shareholders by the weighted average number of shares outstanding during the year, excluding treasury shares. Since TIM has both Ordinary and Savings Shares outstanding, the calculations also take into account the requirement that holders of Savings Shares are entitled to an additional dividend equal to 2% of 0.55 euros per share above dividends paid on the Ordinary Shares.
For the purpose of these calculations, the weighted average number of:

Ordinary Shares was:

- 15,039,368,195 for the year ended December 31, 2018 and 2017;
- 15,039,128,128 for the year ended December 31, 2016;
- 14,889,773,009 for the year ended December 31, 2015; and
- 14,851,386,060 for the year ended December 31, 2014.

Savings Shares was:

- 6,027,791,699 for the years ended December 31, 2018, 2017 and 2016;
- 6,026,677,674 for the year ended December 31, 2015; and
- 6,026,120,661 for the year ended December 31, 2014.

For diluted earnings per share the weighted average number of shares outstanding is adjusted assuming conversion of all dilutive potential shares. Potential shares are those securities that, if converted into shares, would increase the total number of shares outstanding and reduce the earnings attributable to each share. Potential shares include options, warrants and convertible securities. The Group s profit (loss) is also adjusted to reflect the impact of the conversion of potential shares net of the related tax effects.

Diluted earnings per share was:

- 0.06 for Ordinary Share and Savings Share in 2018; and

- nil in 2014, 2015, 2016 and in 2017.

(4) TIM s dividend coupons for its Savings Shares for the year ended December 31, 2018, will be clipped on June 24, 2019 and will be payable from June 26, 2019.

(5) Share capital represents share capital issued net of the accounting par value of treasury shares; accounting par value is the ratio of total share capital and the number of issued shares.

(6) Net Financial Debt is a Non-GAAP Financial Measure as defined in Item 10(e) of Regulation S-K under the 1934 Act. For further details please see Item 5. Operating and Financial Review and Prospects 5.2 Results of Operations for the Three Years Ended December 31, 2017 5.2.3 Non-GAAP Financial Measures .

(7) Excludes full-infrastructured OLOs and FWA-Fixed Wireless Access.

### 3.4 DIVIDENDS

The determination of our future dividend policy, and the amounts thereof, will depend upon a number of factors, including but not limited to our earnings, financial condition and cash requirements, prospects and such other factors as may be deemed relevant at the time.

The following table sets forth the dividends per Ordinary Share and per Savings Share declared by TIM with respect to each of the last five fiscal years and the aggregate dividends paid in such years. Actual dividends paid are rounded to the nearest whole cent.

No ordinary share dividend is being paid for the year ended December 31, 2018.

| | Dividends on Ordinary Shares | | | Dividends on Savings Shares | | |
|---|---|---|---|---|---|---|
| Year ended December 31, | Euros per Share | U.S. Dollars per Share(1) | (millions of euros) | Euros per Share | U.S. Dollars per Share(1) | (millions of euros) |
| 2014 | | | | 0.0275 | 0.0307 | 165.72 |
| 2015 | | | | 0.0275 | 0.0310 | 165.76 |
| 2016 | | | | 0.0275 | 0.0307 | 165.76 |
| 2017 | | | | 0.0275 | 0.0338 | 165.76 |
| 2018(2) | | | | 0.0275 | 0.0308 | 165.76 |

(1) Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on the respective payment dates. For the year ended December 31, 2018, Euro amounts have been translated into U.S. dollars using the Noon Buying Rate in effect on April 5, 2019.

(2) TIM s dividend coupons for its Savings Shares for the year ended December 31, 2018, will be clipped on June 24, 2019 and will be payable from June 26, 2019.

Payment of annual dividends is subject to approval by the holders of Ordinary Shares at the annual general shareholders meeting, which must be held within 180 days after the end of the financial year to which it relates (pursuant to article 18, second paragraph, of the Company s Bylaws). In addition, Article 21 of the Company s Bylaws gives the Board of Directors the power to approve the distribution of interim dividends . Pursuant to Italian law, the distribution may be approved after the final approval of the preceding year s financial statements, and the interim dividends may not exceed the lower of (i) the difference between profits from the preceding fiscal year and amounts required to be attributed to legal and statutory reserves and (ii) available reserves. Once paid in compliance with applicable laws, shareholders cannot be required to repay interim dividends to the Company if the shareholders collected such dividends in good faith. Dividends not collected within five years from the date they become payable will be forfeited in favor of the Company. If profits are not fully distributed, additional reserves are created.

According to the Italian Civil Code, before dividends may be paid with respect to any year, an amount equal to 5% of the profit of the Company for such year must be set aside to the legal reserve until the legal reserve, including amounts set aside during prior years, is at least equal to one-fifth of the par value of the Company s issued share capital. This legal reserve is not available for payment of dividends. Such restriction on the payment of dividends applies, on a non-consolidated basis, to each Italian subsidiary of the TIM Group. The Company may also pay dividends out of available retained earnings from prior years or other reserves.

Dividends in respect of Ordinary Shares and Savings Shares held with Monte Titoli S.p.A. ( **Monte Titoli** ) are automatically credited to the accounts of the beneficial owners with the relevant participant of Monte Titoli, without the need for presentation by such beneficial owners of any documentation. See Item 10. Additional Information 10.4 Description of Capital Stock .

Arrangements between Euroclear or Clearstream and Monte Titoli permit the shareholders to collect the dividends through Euroclear or Clearstream. Holders of American Depositary Receipts ( **ADRs** ) are entitled to receive payments in respect of dividends on the underlying Ordinary Shares and Savings Shares, as the case may be, in accordance with the relevant Deposit Agreement.

Dividends payable on the Company s Ordinary Shares and Savings Shares may be subject to deduction of Italian withholding tax. See Item 10. Additional Information 10.6 Taxation . Italian regulations do not contain any specific restrictions on the payment of dividends to non-residents of Italy. See Item 10. Additional Information 10.2 Exchange Controls and Other Limitations Affecting Security Holders .

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**Item 3. Key Information** **Dividends**

Pursuant to Italian law, in connection with the payment of dividends, participants of Monte Titoli are required to supply to the Italian tax authorities certain information concerning the identity of non-resident shareholders holding Ordinary Shares or Savings Shares. Shareholders are required to provide their Italian tax identification number, if any, or alternatively, in the case of legal entities, their name, country of establishment and address, or in the case of individuals, their name, address and place and date of birth, or in the case of partnerships, the information required for legal entities and the information required for individuals with respect to one of their representatives. In the case of Ordinary Share ADSs and Savings Share ADSs owned by non-residents in Italy, TIM understands that the provision of information concerning the Depositary, in its capacity as holder of record of the Ordinary Shares and Savings Shares, as the case may be, will satisfy these requirements.

The Depositary, in accordance with instructions from TIM, will provide information to beneficial owners of Ordinary Share ADSs and Savings Share ADSs, that are considered U.S. residents for purposes of applicable law. To the extent such owners wish to benefit from reduced withholding tax rates on dividends under an income tax treaty, claims for such benefits must be accompanied by the required information. See Item 10. Additional Information 10.6 Taxation .

## Item 4. INFORMATION ON THE TIM GROUP

### 4.1 BUSINESS

#### 4.1.1 BACKGROUND

The legal name of the company is Telecom Italia S.p.A. also named TIM S.p.A. .

The Annual Shareholders Meeting held on May 25, 2016 approved an amendment to the Company s bylaws, permitting the company to be named Telecom Italia S.p.A. or TIM S.p.A. .

TIM is a joint-stock company established under Italian law on October 29, 1908, with registered offices in Milan at Via Gaetano Negri 1. The telephone number is +39 (02) 85951. The company is recorded in the Milan Companies Register at number 00488410010, R.E.A. (Repertorio Economico Amministrativo) at number 1580695 and R.A.E.E. (Rifiuti di Apparecchiature Elettriche ed Elettroniche) register at number IT08020000000799.

Our Depositary in New York (JP Morgan Chase Bank N.A.) is presently located at 4 New York Plaza, New York, New York 10004.

The duration of the company, as stated in the company s Bylaws, extends until December 31, 2100.

After the effectiveness of the demerger of Telco S.p.A. (previously the largest shareholder of TIM and whose investors were Assicurazioni Generali S.p.A., Intesa Sanpaolo S.p.A., Mediobanca S.p.A. and Telefónica S.A.), on June 24, 2015, Vivendi S.A. ( **Vivendi** ), an integrated media and content group based in France, became o our largest shareholder with an ownership stake in TIM equal to 14.9% of Ordinary Shares. In the following months, Vivendi further increased its shareholding in the Company and, as of April 8, 2019, Vivendi holds 23.94% of the ordinary share capital of TIM. Vivendi does not hold Savings Shares (or Savings Share ADSs) and does not have different voting rights in meetings of ordinary shareholders of TIM.

At the Shareholders Meeting held on April 24, 2018, a new Board of Statutory Auditors was appointed for a 3-year term that terminates following the approval of the financial statements for the year ended December 31, 2020. Vivendi s slate obtained the higher number of votes and as a result, 3 out of 5 Standing Auditors were appointed from such slate.

The Shareholders Meeting held on May 4, 2018, established the number of Directors at 15, the duration of their term of office at three financial years (until the approval of the financial statements as of 31 December 2020) and appointed a new Board of Directors. As the slate presented by the shareholders Elliott lnternational LP, Elliott Associates LP e The Liverpool Limited Partnership received more votes, in accordance with the Bylaws, 10 out of 15 Directors were appointed from this slate, while the remaining 5 were appointed from Vivendi s slate.

See Item 6. Directors, Senior Management and Employees 6.1 Directors for further details.

We file Annual Reports on Form 20-F and furnish periodic reports on Form 6-K to the SEC. Our SEC filings are available at the website maintained by the SEC at www.sec.gov.

As described elsewhere in this Annual Report, certain reports, statements and presentations related to TIM can be found on our website at www.telecomitalia.com.

### 4.1.2 DEVELOPMENT

On February 21, 2019, TIM presented its 2019 2021 Strategic Plan. The 2019-2021 Plan sets out the primary strategic objectives of the TIM Group over the next three years as well as a number of strategic priorities to achieve such objectives.

For more details, please see 4.1.7 Updated Strategy .

### 4.1.3 BUSINESS

The Group operates mainly in Europe, South America and the Mediterranean Basin.

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**Item 4. Information On The TIM Group** **Business**

The TIM Group is principally engaged in the communications sector and, particularly, the fixed and mobile national and international telecommunications sector.

The operating segments of the TIM Group are organized according to the respective geographical location of the telecommunications business (Domestic Italy and Brazil).

In 2018, there were no significant changes in the scope of consolidation of the TIM Group.

For further details please see Item 5. Operating and Financial Review and Prospects 5.2 Results of Operations for the Three Years Ended December 31, 2018 5.2.2. Business Segments and Note Scope of Consolidation of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The following is a summary description of the TIM Group s principal geographical business areas.

***Domestic Business Area***

**TIM** operates as the market leader in Italy providing telephone and data services on fixed-line and mobile networks for final customers (retail) and other operators (wholesale).

**Olivetti**, part of the Business segment of Core Domestic, operates in the area of office products and services for information technology ( **IT** ), covering the traditional offer areas of the office and retail world as well as the innovative world of IoT, M2M and Big Data.

**INWIT** S.p.A. operates in the electronic communications infrastructure sector, specifically relating to infrastructure for housing radio transmission equipment for mobile telephone networks, for TIM and other operators.

The **Telecom Italia Sparkle group** operates at an international level in the development of fibre-optic networks for wholesale customers (in Europe, the Mediterranean and South America).

TIM is one of four mobile operators authorized to provide services using GSM 900 technology in Italy and one of four operators authorized to provide services using GSM 1800 (formerly DCS 1800) technology in Italy. It is also one of four operators holding a UMTS authorization and providing third-generation telephony services in Italy and it is one of the three operators that acquired a 800MHz spectrum in 2011 to provide 4G Service in Italy. In addition, TIM possesses 2600MHz and 1450MHz licenses.

The auction for the award of frequencies for 5G services was held during 2018. TIM awarded the largest part of the spectrum, respectively 10+10 Mega at 700MHz, 80 Mega in the 3.6-3.8 GHz band and 200 Mega in the 27 GHz band, strengthening its competitive position in terms of bandwidth and quality of service offered.

At December 31, 2018, the TIM Group had approximately 10,149 thousand physical accesses (retail) in Italy, a decrease of 895 thousand compared to December 31, 2017. The broadband portfolio in Italy was 11,184 thousand accesses at December 31, 2018 (consisting of approximately 7,575 thousand retail accesses and 3,609 thousand wholesale accesses), an increase of 1,030 thousand compared to December 31, 2017 (10,154 thousand accesses). In addition, the Telecom Italia Group had approximately 31,818 thousand mobile telephone lines in Italy at December 31, 2018, an increase of 1,063 thousand compared to December 31, 2017.

***Brazil Business Area***

TIM Brasil is a telecommunications company that offers mobile voice and data services, broadband Internet access, value-added services, and other telecommunications services and products in Brazilian market. These services are provided through 4G, 3G and GSM technologies. With the acquisitions of 700MHz and 2.5GHz radiofrequencies, focus is on accelerating the development of the 4G network. With the acquisitions of Intelig Telecomunicações (now TIM S.A.), Tim Fiber RJ and Tim Fiber SP (now merged into TIM S.A.), TIM Brasil s portfolio of services has been expanded by offering optic fiber data transmission using full IP technology, such as DWDM and MPLS and offering residential and business broadband services.

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**Item 4. Information On The TIM Group** **Business**

At December 31, 2018, the TIM Group had 55.9 million mobile telephone lines in Brazil, as compared to 58.6 million at December 31, 2017.

### 4.1.4 DISPOSALS AND ACQUISITIONS OF SIGNIFICANT EQUITY INVESTMENTS IN 2018

For a description of disposals and acquisitions of significant equity investments in 2018 please see Note Scope of consolidation and Note Investments of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

### 4.1.5 RECENT DEVELOPMENTS DURING 2019

On April 5, 2019 the rating agency Fitch Ratings downgraded TIM s Long Term Issuer Default Rating to BB+ with a Stable outlook.

### 4.1.6 OVERVIEW OF THE TIM GROUP S MAJOR BUSINESS AREAS

The following is a chart of the TIM Group s Business Units as of December 31, 2018:

(*) Business unit.
(**) Main subsidiaries: TIM S.p.A., INWIT S.p.A., Telenergia S.p.A., Telecontact Center S.p.A., Olivetti S.p.A., HR Services S.r.l, TIMVision and Noverca.
For further details about companies which are part of the Business Units, please see Note List of companies of the TIM Group of the Notes to the Consolidated Financial Statements included elsewhere herein.

For revenues, operating profit (loss) and number of employees of the TIM Group s Business Units please see Item 5. Operating and financial review and prospects 5.2 Results of operations for the three years ended December 31, 2018 5.2.5 Business unit financial data .

### 4.1.7 UPDATED STRATEGY

***Strategic Priorities and Objectives for the 2019 2021 Strategic Plan***

On February 21, 2019, TIM s Board of Directors approved the 2019 2021 Strategic Plan (the **Plan** ).

The Plan focuses on improving TIM s execution and timely delivery of what planned as a key element for the organic transformation of TIM, while exploiting strategic options to unlock value.

The main objectives over the Plan s horizon are the following:

- delevering the Company;
- simplifying and optimizing processes;
- delivering a sustainable return on capital invested, strengthening cash flow generation through top line stabilization, leaner cost structure and working capital optimization;
- optimizing invested capital through network sharing, key to enhance ROIC;
- revamping Domestic business focusing on quality, TIM s scale and its technical competences;
- enhancing Brasil riding growth waves and continuing towards postpaid migration.

The main strategic priorities in the domestic (Italian) market are:

**Consumer**:

- restart from competitive advantages: network quality, scale and client proximity, and technical competences and geographical presence;
- shift from number of Gigabytes to quality of Gigabytes ;
- strong push on upselling to put Average Revenue per User (ARPU) on an upward trend.

**Content**:

- revamp offer as a media aggregation platform with differentiating value proposition versus competitors;

- establish new partnerships to enrich content catalogue.

**Business**:

- become one stop shop , top quality ICT partner for SMEs;
- evolve towards a real ICT solution provider for the largest clients.

**Wholesale**:

- defend wholesale accesses market share through fast UBB migration;
- maintain UBB coverage leadership;
- increase of revenues share in not regulated services.

An important contribution to the Plan is also expected from the subsidiaries TIM Brasil, Inwit and Telecom Italia Sparkle, for which strategic priorities include:

**TIM Brasil**:

- strongly expand its mobile post-paid customers;
- grow its B2B revenues;
- develop the fixed residential UBB customer base.

**Inwit:**

- strengthen its leadership in Italian wireless infrastructure market with growing tenancy ratio, more customers, new towers;
- establish foundations for 5G monetization (also leveraging on the potential business combination with Vodafone).

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**Item 4. Information On The TIM Group** **Business**

**Telecom Italia Sparkle:**

- relaunch of the company scaling up infrastructure presence and growing in Enterprise networking and cloud;

- evaluate partnerships to accelerate growth and to unlock strategic optionality.

The strong focus on Execution is one of the key pillars of the plan requiring discipline, focus and simplicity. A streamline organization is needed to promote accountability and improve the way of working. Dedicated Delivery Units have been set up to facilitate and orchestrate the transformation, particularly on transversal topics and to ensure the implementation of the identified cost cutting initiatives. A revised corporate culture capable of building capabilities, fostering talents and engaging the entire employee base will complete the operating platform transformation.

On the Technological front, the Plan sets modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditures intensity. It will be finalized the migration to an all-IP network and it will be built a brand new and fully automated 5G network. At the same time the decommissioning of legacy platforms, equipment and applications will be completed as soon as possible.

Quality and reliability on all customer touch points (activation, delivery and problem resolution) are at the center of the strategy. To this aim the most important processes will be redesigned and a central end-to-end factory will lead the process re-engineering effort.

On February 21, 2019, TIM and Vodafone Italia announced to have signed a Memorandum of Understanding and agreed to enter into exclusive discussions for a new network sharing partnership. Both companies intend to enter into an active network sharing partnership for 5G, to consider active sharing for 4G and to expand their existing passive sharing agreement. Vodafone and TIM have also agreed to explore a potential transaction that would entail the parties consolidating their approximately 22,000 passive towers located in Italy into a single business entity, potentially combining Vodafone s passive tower infrastructure with the infrastructure of Inwit, the 60%-owned and publicly listed tower subsidiary of TIM. The partnership would allow acceleration of 5G deployment to have a wider geographic reach and to achieve significant operating expenditure and capital expenditure synergies.

TIM started discussions with Open Fiber to explore all possible options including a full business combination, in order to explore the value creation opportunity that a single network presents. The Company continues to work with its financial advisors on exploring the single network opportunity and on maximizing the value of TIM s fixed network. Convergence of the two networks would carry advantages for all stakeholders, including the companies involved, the market, shareholders and the country as a whole, which would benefit from faster, cutting-edge infrastructure.

*There can be no assurance that these objectives will actually be achieved. See Introduction Cautionary Statement for Purposes of the Safe Harbor Provisions of the United States Private Securities Litigation Reform Act of 1995 .*

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**Item 4. Information On The TIM Group** **Business**

### 4.1.8 THE ORGANIZATIONAL STRUCTURE

The following diagram highlights the organizational structure of the TIM Group as of April 8, 2019:

## 4.2 BUSINESS UNITS

### 4.2.1 Domestic

The Domestic Business Unit operates as the market leader in providing voice and data services on fixed and mobile networks for final retail customers and other wholesale operators. Internationally, the Business Unit develops fiber optic networks for wholesale customers (in Europe, in the Mediterranean and in South America).

The Business Unit operates, through INWIT, in the electronic communications infrastructure business, specifically infrastructure for housing radio transmission equipment for mobile telephone networks for TIM and other operators.

Olivetti operates in the area of products and services for Information Technology.

As of December 31, 2018, the Domestic Business Unit was organized as follows:

(*) Main subsidiaries: TIM S.p.A., INWIT S.p.A., Telenergia S.p.A., Telecontact Center S.p.A., Olivetti S.p.A., HR Services S.r.l, TIMVision and Noverca.

The principal operating and financial data of the Domestic Business Unit are reported according to the following two cash-generating units ( **CGU** ):

- **Core Domestic**: includes all telecommunications activities within the Italian market. The sales market segments established on the basis of a customer-centric organizational model are as follows:

  - **Consumer**: the segment consists of all fixed and mobile voice and internet services as well as products managed and developed for individuals and families and of public telephony; customer care, operating credit support, loyalty and retention activities, sales within its assigned area, and administrative management of customers; the segment includes the companies 4G Retail, Persidera and Noverca;

  - **Business**: the segment consists of voice, data, and internet services and products, and ICT solutions managed and developed for small and medium-size enterprises (SMEs), Small Offices/Home Offices (SOHOs), Top customers, the Public Sector, Large Accounts, and Enterprises in the Fixed and Mobile telecommunications markets; the segment includes the companies: Olivetti, Telsy, Trust Technologies and Olivetti Scuola Digitale (formerly Alphabook);

  - 

**Wholesale**: the segment consists of the management and development of the portfolio of regulated and unregulated wholesale services for Fixed and Mobile telecommunications operators in the domestic market and Open Access operations connected with delivery and assurance processes for customer services. The segment includes the companies: TN Fiber, Flash Fiber, TI San Marino and Telefonia Mobile Sammarinese;

- **Other INWIT S.p.A. and support structures:** includes:

  - **INWIT S.p.A**.: since April 2015, the company has been operating within the Operations area in the electronic communications infrastructure sector, specifically relating to infrastructure for housing radio transmission equipment for mobile telephone networks for TIM and other operators;

  - **Other Operations units**: covering technological innovation and the processes of development, engineering, building and operating network infrastructures, IT, real estate properties and plant engineering;

- **Staff & Other**: services carried out by Staff functions and other support activities performed by minor companies of the Group, also offered to the market and other Business Units.

- **International Wholesale Telecom Italia Sparkle group**: includes the activities of the Telecom Italia Sparkle group, which operates in the market for international voice, data and internet services for fixed and mobile telecommunications operators, ISPs/ASPs (Wholesale market) and multinational companies through its own networks in the European, Mediterranean and South American markets.

v **MARKETING CHANNELS AND DISTRIBUTION**

At December 31, 2018, as a result of the customer-centric approach, TIM utilized the following sales structure for each of its customer segments:

***Distribution***

The sales structure is organized according to a vertical, multi-channel approach, in which different types of distribution channels are specialized for different customer segments of the market, based on clusters of customers and services. This approach enhances the focus and customization of our products.

- ***Consumer***

Consumer customers are managed by several channels focused on volume and value acquisitions, including:

- the Push channel consisting of an outbound telephone channel called Telesales with a network of 30 partners having a total of approximately 3,500 operators and the Agent channel with approximately 90 Direct Agents and a network of 80 partners with approximately 2,500 sales agents;

- the Pull channel: consisting of the retail network of shops, dealers and large retailers, amounting to a total of approximately 5,000 retail points of sale (at December 31, 2018). Points of sale are geographically widespread and they are of different types: direct (flagship stores and 4G mall stores); franchisee; monobrand; multibrand; organized and specialized large-scale distribution.

In addition to these partners, distribution is also carried out through the Public Telephone channel, consisting of 6 technical partners that provide maintenance and other related services.

- ***Business***

Commercial customers are managed by a single sales unit that addresses customers through both Direct and Indirect Sales. The Sales channel is organized into five different segments. One of these segments is aimed to the main customers, which includes the most important Private enterprise and the Public central government and is managed only through the Direct Sales Channel. The remaining four manage strategic, large, medium and small regional customers and include both Direct and Indirect Sales Channels.

- ***Indirect Sales Channel***

The company distribution channels include:

- Channel BP-Business Partner (about 60 entrepreneurs with about 100 agencies spread over 4 territorial areas): a network of agents focused on standard offers (small market) with about 2,200 agents (1,300 FTE);

Features:

- The agencies are remunerated on the basis of a commissions plan based on an ordinary remuneration and extra remuneration for the achievement of specific sales targets;
- The agencies have a mandate to acquire new customers and develop the customer base;
- Each agency is exclusively assigned a cluster of value customers (2% of the customer base) on which to develop and maintain.
- Outbound Call Center: 8 partners focused on specific activities of propaganda and customer loyalty;
- Senior Agent: 140 agents focused on medium-sized private clients;

- Shops: some specific shops (about 900 out of the 2,400 total) that offer products and business assistance.

- **Direct Sales Channel**

As of the end of 2018 more than 1000 sales staff have been working on a individually dedicated customer portfolio to manage and develop, supported by pre sales and post sales teams, according to a strong growth plan of direct sales coverage of the market, that is expected to scale up performances through increased proximity and quality of the relationship. The main activities include supporting the digital transformation journey of private enterprises and public administrations, offering the whole range of services (fixed and mobile voice and data, ICT services and products) and developing custom solutions and projects.

- ***Wholesale***

The Wholesale ( W ) department manages relationships with approximately 400 other telecommunications operators (Wholesale Market), who can be both customers and competitors of TIM. These customers purchase TIM network and professional services to build services for their own customers.

In order to ensure complete management of the relationship with customers, the Wholesale department is organized to cover all stages of the process:

- analysis of technological innovation, for New Products and Service Innovation Marketing;
- analysis of business evolution in the wholesale market, for Marketing development;
- definition of the offer for wholesale regulated services, such as Interconnection, Data Services, Access Services; the offer is developed by the marketing group according to conditions and rules set by National and European Authorities;
- sales through direct vendors, which are supported by presales and project managers; they are organized into two Commercial Local Areas: one for the North of Italy and another one for Centre and South of Italy;
- contracts definition and disputes solution through specialized personnel; and
- billing, credit and administrative activities, revenue integrity control.

The Wholesale department is set up as an independent department, which allows TIM, along with other conditions (accounting separation, compliance with the resolutions of the Authorities) to manage transparency and fairness in its relationship with other operators, as well as compliance with all regulatory requirements.

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## v CUSTOMER AND LINES

The table below sets forth, for the periods indicated, certain statistical data of the Domestic Business Unit:

| | As of and for the years ended December 31, | | |
|---|---|---|---|
| | **2018** | **2017** | **2016** |
| **DOMESTIC FIXED** | | | |
| Physical accesses (thousand)(1) | 18,212 | 18,995 | 18,963 |
| *Of which retail physical accesses (thousand)* | *10,149* | *11,044* | *11,285* |
| Broadband accesses in Italy at year-end (thousand)(2) | 11,184 | 10,154 | 9,206 |
| *Of which retail broadband accesses (thousand)* | *7,575* | *7,641* | *7,191* |
| **Network infrastructure in Italy:** | | | |
| access network in copper (millions of km pair, distribution and connection) | 114.4 | 114.6 | 114.4 |
| access and carrier network in optical fiber (millions of km fiber) | 16.4 | 14.3 | 12.6 |
| **Total traffic:** | | | |
| Minutes of traffic on fixed-line network (billions): | 58.3 | 64.0 | 69.1 |
| *Domestic traffic* | *46.2* | *50.7* | *55.6* |
| *International traffic* | *12.1* | *13.3* | *13.5* |
| Broadband traffic (PBytes)(3) | 9,394 | 7,848 | 5,774 |
| **DOMESTIC MOBILE** | | | |
| Number of lines at year-end (thousand)(4) | 31,818 | 30,755 | 29,617 |
| Change in lines (%) | 3.5 | 3.8 | (1.3) |
| Churn rate (%)(5) | 26.3 | 26.2 | 22.8 |
| **Total traffic:** | | | |
| Outgoing retail traffic (billions of minutes) | 57.0 | 51.4 | 44.9 |
| Incoming and outgoing retail traffic (billions of minutes) | 85.4 | 78.1 | 69.6 |
| Mobile browsing volumes (PBytes)(6) | 686.8 | 417.5 | 258.5 |
| Average monthly revenues per line(7) (euro) | 11.5 | 12.5 | 12.4 |

(1) Excludes full-infrastructured OLOs and FWA-Fixed Wireless Access.

(2) Excludes OLO LLU and NAKED, satellite, full-infrastructured and FWA Fixed Wireless Access.

(3) DownStream and UpStream traffic volumes.

(4) The figure includes the SIM cards used on platforms for delivering Machine-to-Machine services.

(5) The data refers to total lines. The churn rate represents the number of mobile customers who discontinued service during the period expressed as a percentage of the average number of customers.

(6) National traffic, excluding roaming.

(7) The values are calculated on the basis of revenues from services (including revenues from prepaid cards) as a percentage of the average number of lines.

v **MAIN CHANGES IN THE REGULATORY FRAMEWORK**

For a description of the main regulatory events that occurred in 2018 and which may have a significant impact on the operation of the Domestic Business Unit, please see Item 4. Information On The TIM Group 4.3 Regulation.

v **COMPETITION**

***The market***

During 2018, the Italian TLC market was affected by a downturn due to tougher competition in the mobile sector.

The expansion of broadband and ultra-broadband has been the main driver of market growth, helping to open up new opportunities for telecommunications providers to develop convergent offers that bundle together TLC services with Media & Entertainment services, IT services and Digital services.

The Italian telecommunications market has always been highly competitive; in particular core competition with other operators in the sector is still the factor with the greatest impact on market trends. Telecommunications operators must also face the challenges from Over the Tops (OTT) and device manufacturers, that operate in the new digital world using completely different assets and competitive strategies to TLC players.

The traditional business models of the various market players are, therefore, changing to exploit new opportunities and meet the challenges posed by the new entrants:

- in the Media & Entertainment segment, as the web takes on growing importance as a complementary distribution platform, OTTs, telecommunications providers and consumer electronics manufacturers are acquiring an increasingly major role;
- in the Information Technology market, the decline in traditional revenues is driving the various players towards cloud computing, with the goal of protecting their core business. Telecommunications providers are strengthening in this sector, including through partnerships;
- Consumer Electronics manufacturers are developing services that can be accessed through the Internet by leveraging handset ownership and user experience management, breaking the relationship between customers and TLC providers;
- OTTs have been leading the transformation in how TLC services are used (including voice services), increasingly integrating them with Media & Entertainment, IT and new Digital services.

With regard to the current positioning of telecommunications providers in converging markets, on the other hand, as partially described above, the following is taking place with different levels of progress:

- development of new Media & Entertainment services (TV, Music, Gaming) and new Digital services (Smart Home, Digital Advertising, Mobile Payment-Digital Identity);
- development of Innovative Services in the IT market, particularly Cloud services.

During 2018, the bidding for the award of frequencies for 5G services took place, which led to an overall outlay for telecommunications companies of over 6.5 billion euros, well above the minimum bid price.

TIM and Vodafone were awarded the largest part of the spectrum: 10+10 MHz at 700 MHz, 80 MHz in the 3.6-3.8 GHz band respectively (the most requested to launch good-quality 5G services) and 200 MHz in the 27 GHz band, thereby reinforcing our competitive positioning in terms of bandwidth owned and quality of service offered.

Based on performance capabilities in terms of speed, latency and number of connected devices, 5G is an opportunity for telecommunications companies with the necessary bandwidth to open new vertical markets (e.g., automotive, smart agriculture, logistics, cloud robotics), provide new services, commence new production processes and increase the efficiency of optimized product management.

***Competition in Fixed-Line Telecommunications***

The fixed-line telecommunications market has continued to see a decline in access and voice revenues, while broadband and ultra-broadband revenues have shown continuous growth. In recent years, service providers have concentrated mainly on expanding the penetration of broadband and ultra-broadband services and defending Voice revenues by introducing bundled voice, broadband and service deals in a highly competitive environment with consequent pricing pressure.

Deals and offers are also becoming more competitive thanks to the consolidation, among competitors, of an approach based on control over infrastructure (above all, Local Loop Unbundling (LLU), as well as Fiber to the Cabinet (FTTC) networks). The main fixed-line service providers are also offering mobile services, also as Mobile Virtual Operators (MVOs).

As concerns competition in infrastructure, two providers  Open Fiber (an ENEL Group company) and Infratel (controlled by the Ministry of Economic Development)  presented plans for the development of their own optic fiber networks as alternatives to the TIM network, which respectively target major Italian cities and areas of market failure.

Open Fiber announced a plan to invest 3.8 billion euros in the development of Fiber to the Home (FTTH) in 271 large Italian towns by 2022, reaching around 9.6 million homes.

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Open Fiber obtained 3.5 billion euros in funding in July 2018. Following the receipt of such funding, the development of the Open Fiber network was stepped up considerably, opening up to 71 Italian towns (as of January 2019), including many major Italian cities, such as Milan, Turin and Bologna, where Metroweb (acquired in December 2016) had previously expanded, as well as Bari, Cagliari, Catania, Naples, Padova, Perugia, Venice, Genoa, Palermo and Florence, and smaller towns that are mainly satellite areas of Milan, Turin and Bologna.

In the meantime, according to media reports, our main competitors in the TLC retail market have signed an agreement with Open Fiber to link their new ultra-broadband customers onto its network, where available.

As concerns areas of market failure the so-called white areas in the C and D clusters of the government s Ultra-Broadband Plan Infratel held three public calls for tenders over the last three years for the development of a UBB network to deliver services to around 7,500 municipalities across 19 regions.

- In the first call for tenders, Open Fiber won all five of the lots offered in the six regions involved (Lombardy, Emilia Romagna, Veneto, Tuscany, Abruzzo and Molise), covering around 3,000 municipalities.

- In the second call for tenders, Open Fiber won all six of the lots offered in the ten regions involved (Piedmont, Valle d Aosta, Liguria, Friuli Venezia Giulia, the Autonomous Province of Trento, Marche, Umbria, Lazio, Campania, Basilicata and Sicily), covering around 3,700 municipalities.

- In the third call for tenders, Open Fiber won all three lots in the three regions involved (Apulia, Calabria and Sardinia) covering around 880 municipalities.

In January 2019, there were approximately 1,174 work sites open for the first two Infratel/Open Fiber contracts, of which 977 for fiber optic connections and 197 for wireless connections (FWA).

Therefore the development of Open Fiber Plans both in major Italian cities and market failure areas will drive a significant shift in infrastructure competition, with the development of various competitive dynamics depending on the overlap and reach of available ultrabroadband infrastructure:

- areas with two FTTH networks overlapping FTTC networks;

- areas with a single FTTH network overlapping FTTC networks;

- areas with FTTH networks overlapping ADSL networks;

- areas with FTTC networks overlapping ADSL networks.

Competition in the Italian fixed-line telecommunications market is also characterized by the presence of other service providers besides TIM, such as Wind-Infostrada, Fastweb, Vodafone, and Tiscali, which have business models focused on different segments of the market. In December 2018, fixed accesses in Italy were estimated to be around 20.3 million (including OLO Infrastructured and FWA-Fixed Wireless Accesses) down slightly on the previous year. Competition in the access market led to a gradual reduction in TIM s market share.

As concerns the Broadband market, at December 31, 2018, the number of fixed-line broadband (including both broadband and ultrabroadband customers) customers in Italy was estimated to have reached a penetration rate of approximately 86% of all fixed-line access. The spread of broadband continues to be driven by the penetration of computers and other enabled devices (such as Smart TVs), but also by growing demand for fast connections and access to new over-IP services that are becoming increasingly widespread (Media & Entertainment, IT and Digital services).

***Competition in Mobile Telecommunications***

The mobile market has continued to see the rationalization of second and third SIM cards for human communications, while sales of SIM cards for machine to machine (M2M) communications are growing.

Moreover, growth in mobile broadband customers has continued thanks to the high penetration rate of LTE on mobile lines, especially as a result of the increasing spread of smartphones.

Alongside innovative services that have already caught on and are under full-scale development, as in the case of mobile apps, there are other market environments, associated with the development of mobile broadband, with major potential for growth in the medium term, such as the Internet of Things and mobile payment.

The competitive scenario on the Italian mobile telecommunications market in 2018 was marked by the entry of the French operator Illiad, that launched its own service in May, becoming the fourth infrastructured operator in Italy, alongside TIM, Vodafone and WindTre. With a particularly aggressive price and data volume offering, Illiad has rapidly won over customers and consequently gained a market share to the detriment of other infrastructured operators, mainly WindTre and Vodafone, while TIM has shown a greater resilience, thanks also to the contribution from the second brand virtual operator, Kena Mobile, launched during 2017. To best respond to the competitive threat of Illiad, Vodafone also launched its own low-cost operator in June 2018, ho.mobile.

At the same time, mobile virtual operators (MVO), of which PosteMobile is the most important player, also reported a growth trend, taking market share away from infrastructured operators.

This tougher competition following Illiad s entry to the market resulted in a new drop in the spend on services, after several years of relative stability.

### 4.2.2 BRAZIL

The **Brazil Business Unit** (Tim Brasil group) provides mobile telephone services using UMTS, GSM and LTE technologies. Moreover, the Tim Brasil group offers fiber optic data transmission using full IP technology, such as DWDM and MPLS and residential broadband services.

At the end of 2018, Tim Brasil group s coverage reached 93% of the urban population with its 4G network, achieving 3,272 cities with such technology, a 9.0% increase when compared with the same period of 2017.

TIM s strategy is to fulfill consumers needs by understanding what they value and earn their trust based on three pillars: (i) innovation, which is already in the company s DNA and will continue as a priority, with new plans, offers, partnerships and technologies; (ii) quality, as TIM has worked to become a leader in 4G coverage and maintain strong investments in infrastructure to deliver the best to its customers and be prepared for the future; (iii) user experience, which, in addition to the two other pillars, is important to establish a new relationship with customers and act to give every client the best caring experience, great services and a transparent relationship with the company.

The table below sets forth the number of mobile lines of the Brazil Business Unit:

| | As of and for the years ended December 31, | | |
|---|---|---|---|
| | **2018** | **2017** | **2016** |
| Number of lines at year-end (thousands)(*) | 55,923 | 58,634 | 63,418 |
| MOU (minutes/months)(**) | 123.4 | 109.7 | 116.6 |
| ARPU (Reais) | 22.4 | 20.2 | 18.0 |

(*) Data includes company lines (active SIM cards used by the TIM Brasil group and its employees).

(**) Net of visitors.

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v **MARKETING**

With the rapid changes in the consumption of telecommunications services by Brazilian users, Tim Brasil continued its efforts to innovate its offerings for all customer segments (Postpaid, Control and Prepaid) bringing significant changes in all segments, mostly by providing to its customers substantial internet packages with social media and digital services on top of unlimited off-net calls.

This change aims to help Tim Brasil grow its postpaid base, focusing in lock-in offers to increase loyalty and drive churn reduction, and also to protect and increase the value of the prepaid base (segment which the Company maintain its leadership) by providing more complete voice and data offers, at reasonable prices, which, based on a robust 4G network, driven the traffic on such technology to achieve 76% of Tim Brasil total traffic.

Those efforts are producing important results that can be seen by the migration to more expensive packages (from prepaid to control plans and also from control plans to postpaid ones), with a resilient combined postpaid ARPU, while the prepaid segment shows increasing commitment with average recharges growth and stable ARPU.

v **DISTRIBUTION**

As of December 31, 2018, we had more than 11.5 thousand points of sale through premium shops and dealers (exclusive or multi-brand) and consolidated partnerships with large retail chains. This figure includes Tim Brasil s 159 own stores. In addition to these retail stores, Tim Brasil customers have access to prepaid phone services through supermarkets, newsstands, and other small retailers, totaling more than 332 thousand points of sale throughout Brazil.

For the corporate market, Tim Brasil has more than 429 third-party business partners and 87 employees focused on serving small and medium-size companies and a direct sales force team of 98 employees focused on large companies.

In order to serve the customer base of over 55.9 million customers, Tim Brasil maintains 10 customer care centers. Moreover, Tim Brasil has continuously invested in alternative customer service channels, developing solutions based on interactive voice response and self-service and mobile applications for iOS and Android.

v **MAIN CHANGES IN THE REGULATORY FRAMEWORK**

For the main regulatory developments which occurred in 2018 that may have an economic impact on the Brazil Business Unit, please see Item 4. Information On The TIM Group 4.3 Regulation .

v **COMPETITION**

At the end of 2018, the Brazilian mobile market reached 229.2 million lines 7.3 million lines (or 3.1%) lower than at the end of 2017. Consequently the Brazil Business Unit churn rate in 2018 was 47.2% (53.2% in 2017).

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## 4.3 REGULATION

As a telecommunications operator, the TIM Group is subject to sector-specific telecommunications regulations, general competition law and a variety of other regulations, including privacy and security, which can have a direct and material effect on the Group s business areas.

This section describes the legislative framework and the recent legislative key developments.

### 4.3.1 THE EU REGULATORY FRAMEWORK

TIM s operations within the European Union ( **EU** ) are subject to the EU regulatory framework for electronic communications networks and services, which includes directives, regulations, recommendations and communications. As a Member State of the EU, Italy is required to transpose directives issued by the EU into national legislation. The regulations adopted by the European Commission ( **EC** ) are applicable and binding on each Member State without the need of further national implementation. Recommendations and communications, on the other hand, are not legally binding although they have to be taken into account by each Member State.

National Regulatory Authorities ( **NRAs** ) are independent bodies tasked with regulating and supervising the telecommunications sector and compliance with the EU framework in each Member State. In Italy, this body is Autorità Garante per le Comunicazioni ( **AGCom** ) while the Ministry of Economic Development ( **MISE** ) is responsible for national broadband plan, spectrum and numbering management, integrity and security of the network.

Until December 19, 2018 the EU Regulatory Framework has been based on five directives ( Framework , Access and Interconnection , Authorization , Universal Service and Users Rights and Privacy and Data Protection together, **Directives** ) that regulate all forms of fixed and wireless telecommunications and data transmission. In Italy, the Directives have been transposed into the Codice delle comunicazioni elettroniche (Electronic Communications Code **ECC**) which is currently in force.

On December 20, 2018 Directive 2018/1972 establishing the European Electronic Communication Code (the **EECC** ) entered into force. The Directive reviews and combines in one document the Framework , Access and Interconnection , Authorisation and Universal Service and Users Rights Directives (the revision of the Privacy and Data Protection Directive, the so-called e-privacy Directive, is ongoing under separate proceedings). On the same date, Regulation 2018/1971 also entered into force, reviewing the former BEREC (Body of European Regulators for Electronic Communications) Regulation (EC) 1211/2009. The transposition of the EECC into the law of each Member State must occur by December 21, 2020.

The EECC includes measures to promote wholesale-only models of investments and stimulate investments in very high capacity network (VHCN), new rules on spectrum (e.g., minimum license duration) to improve certainty on investment return, changes to regulation of services, introducing more level playing field between telecom operators and new over-the-top-players (OTTs), and the introduction, in the scope of Universal Service Obligation (USO), of the affordability for consumers (with low income or special social needs) of adequate broadband internet access service and voice communications services at least at a fixed location.

In addition, the BEREC Regulation, by amending Regulation (EU) 2015/2120, introduces price caps to be applied from May 15, 2019 on Intra-EU international fixed and mobile calls (19c /min) and SMS (6c /SMS) for consumers.

A Recommendation issued by the EC on relevant product and service markets susceptible of ex ante regulation (Commission s Recommendation on relevant markets) completes this set of legal instruments with the definition of a list of relevant markets whose characteristics may be such as to justify the imposition of regulatory obligations . The Recommendation currently in effect (no. 2014/710/UE) was published on October 9, 2014, following updates in 2003 and 2007. The number of relevant markets subject to ex ante regulation has been reduced over time from 18 to 4, following the growth of the competition in the whole sector (see Wholesale Market Analyses ).

In 2010, the EC adopted a Communication, the Digital Agenda for Europe (the **DAE**), setting forth long-term EU strategies for Broadband. The DAE sets non-binding targets on broadband coverage and take-up to be achieved by 2020:

- Broadband coverage at 30 Mbit/s or more for 100% of EU citizens; and
- 50% of EU households having subscriptions above 100Mbps.

In September 2016, through the Gigabit Society Communication, the EC set the following (not binding) additional targets for the year 2025:

- connectivity of 1 Gbps (upload and download) for all socio-economic entities (i.e. schools, businesses, public administration, etc.);
- connectivity of 100 Mbps download for all European households and businesses; and
- uninterrupted 5G coverage for all urban areas and major terrestrial transport routes (as an interim target, 5G should be commercially available in at least one major city in each EU Member State by 2020).

***1. International Roaming***

Intra-EU roaming services are regulated by the roaming Regulation 531/2012 (the **Roaming III Regulation**), as amended by the Telecom Single Market Regulation 2015/2120 (the **TSM Regulation**) which provides for the abolishing of any roaming service surcharge on top of domestic service prices subject to fair use limits to avoid abuses, starting from June 15, 2017 (Roam Like at Home RLAH regime).

For intra-EU traffic exceeding the fair use limits, operators are allowed to levy a surcharge on top of domestic tariffs. Such a surcharge is capped at the following wholesale caps, established by the Regulation 2017/920, which reviews the Roaming III Regulation wholesale caps.

| | |
|---|---|
| Voice | **3,2 eurocents/min.** |
| SMS | **1 eurocent/min.** |
| Data | 7,7 euro/GB from 15/06/17 |
| | 6,0 euro/GB from 01/01/18 |
| | 4,5 euro/GB from 01/01/19 |

3,5 euro/GB from 01/01/20

3,0 euro/GB from 01/01/21

2,5 euro/GB from 01/01/22

***2. Net Neutrality***

The TSM Regulation introduces new rules on Net Neutrality, which have applied since April 2016. In particular, the TSM Regulation:

- establishes the right of end-user access to distribute information and content, use and provide applications and services and use terminal equipment of their choice and forbids internet service providers from blocking or slowing down specific content, applications or services, except in a very limited set of circumstances;

- allows reasonable traffic management aimed at improving the quality of the network based on objectively different technical quality of service requirements for specific categories of traffic. However, such traffic management must be transparent, non-discriminatory and proportionate and it must not be based on commercial considerations;

- allows operators to offer services, other than internet access services, that are optimized for specific content, applications or services only if the network capacity is sufficient to provide them in addition to any internet access services provided and the offering of such services is not to the detriment of the availability or general quality of internet access services for end-users; and

· allows commercial practices such as zero rating[2] subject to monitoring by the National Regulatory Authority.

The TSM Regulation also places additional transparency obligations on providers of internet access services in addition to those already included in the Electronic Communications Regulatory Framework.

***3. Privacy and Data Protection***

TIM must comply with the EU Regulation 2016/679, General Data Protection Regulation ( GDPR ) since May 2018. The new regulation has adopted a risk based approach, allowing a higher flexibility for service providers to process personal data, while ensuring a high level of protection of personal data of individuals. The GDPR introduces administrative fines of up to 4% of an undertaking s annual global turnover for breaching the new data protection rules.

TIM has put in place a specific project to carry out all the activities needed to ensure its compliance with the new rules introduced by the GDPR.

While the GDPR is a horizontal regulation, applying to all categories of providers, TIM must comply also with the complementing sectorial rules (Directive 2002/58/EC, the so called e-Privacy Directive ), currently under revision, which imposes additional limitation to the data processing by operators of electronic communications services. The EC proposal aligns the fines for non-compliance to the GDPR s.

### 4.3.2 The Italian Regulatory Framework

The main legal references for the electronic communications sector in Italy is the Electronic Communications Code ( ECC ), which transposed into national law the EU Access, Authorization, Framework and Universal Service directives. Moreover, there are other laws affecting TIM s business which govern non-sectorial areas such as consumer, data and security protection and laws which govern specific aspect of communication sector such as Legislative Decree n. 33/2016 (implementing 2014/61/UE Directive), setting forth measures for costs reductions in UBB networks installations and promoting the use of existing infrastructures.

With the law no. 119/2018 dated December 18, 2018, the Government amended the ECC introducing the power for AGCom to define adequate measures of investment remuneration to incentivize the merger of different access networks put under the control of a non-vertically integrated subject offering only wholesale network services.

### 4.3.3 Market analyses

The EU regulatory framework requires the National Regulatory Authorities to carry out market analyses before imposing obligations on individual operators having a Significant Market Power ( **SMP** ) according to the specific EU guidelines.

A description of the Italian wholesale market analyses is summarized below together with the main recent developments regarding the electronic communications markets.

v ***Wholesale fixed access markets***

In December 2015 (Decision n. 623/15/CONS), AGCom defined the rules for the access to TIM s copper and fiber fixed networks for the years 2015-17.

The main regulatory measures are the following:

- confirmation of the national scope of remedies imposed on TIM;

[2] Zero-rating (also called toll-free data or sponsored data) is the practice of mobile network operators (MNO), mobile virtual network operators (MVNO), and Internet Service Providers (ISP) not to charge end customers for data used by specific applications or internet services through their network, in limited or metered data plans. It allows customers to use provider-selected content sources or data services like an app store, without worrying about bill shocks, which could otherwise occur if the same data was normally charged according to their data plans and volume caps. This has especially become an option to market 4G networks, but has also been used in the past for SMS or other content services.

- substantial upholding of Local Loop Unbundling ( **LLU** ) prices together with a reduction of Sub Loop Unbundling ( **SLU** ) and Virtual Unbundling Local Access ( **VULA** prices);
- disaggregation of ancillary service provision for provision and maintenance (i.e. delivery and assurance) for LLU and SLU lines;
- introduction of new equivalence measures, according to the New Equivalence Model (NEM);
- stricter constraints on the quality of wholesale services (SLAs and penalties);
- commitment to define switch-off rules in case of decommissioning of TIM local exchanges of the copper access network:
  - 5 years for the switch-off of local exchanges where LLU is available;
  - 3 years for local exchanges where LLU is not available, or for local exchanges where LLU is available as long as TIM provides competitors with a service that is technically equivalent to copper LLU for at least 2 years after the switch-off.

The NEM, through the reorganization of both assurance and delivery processes, aims to improve end-to-end performance and to remove any possible internal-external process asymmetries between TIM Retail and the alternative operators (such as differences in internal and external reasons for refusal of delivery orders, provision times, customer data bases and order workflows) that could produce potential discrimination between TIM retail and the alternative operators in the conditions of provision of the wholesale services.

The NEM implementation was completed in April 2017 and the migration process of all operators to the New Delivery Systems was completed in July 2018.

With Decision 623/15/CONS, AGCom also asked TIM to present a proposal to introduce a disaggregation model for the delivery and assurance activities of the local loop and sub-loop unbundling lines. TIM s proposal (sent to AGCom in February 2016 and submitted to public consultation by AGCom in April 2016) is based on the extension of the System Unico (i.e., the recourse to external companies by the competing operators) to the above-referenced delivery and assurance activities. In August 2017, with Decision 321/17/CONS, AGCom defined the technical and organizational conditions of the disaggregation model. According to the approved model, alternative operators can autonomously choose whether TIM or external companies have to carry out the above mentioned ancillary activities for LLU and SLU services. Moreover, the alternative operator can make direct arrangements with the external companies regarding a series of activities, such as the contact policy, the economic conditions for the management of the appointments, etc. The main Italian operators started to apply the disaggregation model between December 2018 and February 2019.

On February 20, 2017 AGCom launched the fourth round of the access markets analysis (Decision 43/17/CONS) to review the obligations and economic conditions of the wholesale access services for the period 2018-2021. The markets analysis also takes into account TIM s voluntary legal separation project in relation to its fixed access network.

On March 6, 2018, TIM s Board of Directors approved the project to voluntarily separate the fixed access network through the creation of a legal entity (NetCo) separate from the rest of the company (ServCo). The new company (NetCo), 100% controlled by TIM, will have its assets (access network infrastructure, from the exchange to customers homes, as well as buildings, electronic equipment and IT systems) and the personnel necessary to provide wholesale services independently. The model is intended to guarantee full equality of treatment, thanks to a single access point; a one-stop shop for regulated and unregulated wholesale services for all operators, including TIM.

On March 27, 2018, TIM notified to AGCom the voluntarily separation project and on June 6, 2018, AGCom found the project admissible. Therefore, pursuant to Article 50 ter of the Electronic Communications Code, AGCom started a coordinated analysis of the different markets related to the access network to assess the effect of the project on existing regulatory obligations.

From January 18 to March 4, 2019, AGCom carried out a public consultation (Decision 613/18/CONS) on the outcome of the coordinated markets analysis.

In the text under consultation, AGCom gives a positive evaluation of TIM s access network separation project since it strengthens the equivalence conditions and softens the competitive issues found in the previous market analysis. Anyhow, the Authority deems that some vertical integration issues remain (Netco is fully controlled by TIM and ServCo operates directly in the retail market and indirectly in the wholesale market) as well some risks of anticompetitive conduct.

With reference to the separation project, AGCM propose to:

1) adequate the accounting separation obligations to the new organization;

2) repeal the obligation to inform AGCom about contracts concluded in the scope of public tenders to allow AGCom to verify the replicability of the fixed access offers;

With reference to the other aspects of market analysis, AGCom makes the following proposals:

- TIM confirmed as having significant market power (SMP) in the access markets on the whole national territory with the exclusion of the city of Milan, where the ex-ante regulation has been withdrawn;

- withdrawal of the cost orientation obligation on wholesale prices (except SLU) in the cities clusters considered as competitive (up to 45 in the first year with potential annual update on the basis of the evolution of alternative infrastructures and markets); these wholesale prices are subjected to an ex-ante replicability test;

- 2018 wholesale monthly rentals for copper and fiber equal to the ones set for 2017;

- gradual increase of full unbundling (ULL) and bitstream over copper rates for the period 2019-2021;

- stability of the sub loop unbundling (SLU) rates for the period 2019-2021;

- gradual decrease of the fiber access rates (VULA FTTC and FTTH) and differentiation of the price of the band for the period 2019-2021 depending on whether the access line is over copper network or NGA;

- reduction of decommissioning notice times, whose duration is linked to the NGA networks coverage (FWA technology included) in the area where the switch is located;

vectoring usage allowed in the FTTC cabinets where the SLU is not employed by alternative operators;

withdrawal of the current asymmetries in the transition procedures to another operator between TIM s return process and switching from TIM to alternative operators.

**Proposed wholesale regulated prices ( / line / month)**

| | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| LLU (copper local loop unbundling) | 8.61 | 8.61 | 8.79 | 8.90 |
| SLU (sub loop unbundling) | 5.30 | 5.30 | 5.30 | 5.30 |
| WLR POTS (Wholesale Line Rental POTS) | 11.06 | 10.73 | 10,91 | 11,02 |
| WLR ISDN BRA (Wholesale Line Rental ISDN BRA) | 13,67 | 13.34 | 13.52 | 13.63 |
| Bitstream shared (copper) | 4.29 | 4.35 | 4.43 | 4.52 |
| Bitstream naked (copper) | 12.46 | 12.45 | 12.58 | 12.69 |
| VULA FTTC naked (30 Mbps) | 13.27 | 13.69 | 13.21 | 12.50 |
| VULA FTTC naked (>50 Mbps) | 15.02 | | | |
| VULA FTTH naked (consumer)* | 17.25 | 15.73 | 15.50 | 15.20 |
| VULA FTTH naked (business)* | | 47.19 | 46.49 | 45.61 |

* *price of 100/10 Mbps offer until 2018; from 2019 onwards AGCom proposes differentiated prices for residential and business*

AGCom s final decision is expected in June-July 2019, after the end of the national consultation and the comments by the European Commission and AGCM.

Ø ***Terminating segment of leased lines***

In July 2015, the Italian NRA approved the decision on terminating segment of leased lines services, essentially confirming the rules laid down at the end of the previous round of market analysis. In particular, regarding

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Synchronous Digital Hierarchy / Plesiochronous Digital Hierarchy ( **SDH / PDH** ) leased lines with capacities less than or equal to 155 Mbit/s and Ethernet over SDH leased lines, TIM is subject to a network price cap (for Access rentals CPI-6%, for Internet Protocol **IP** transport -8.6 %) for 2015, 2016 and 2017. Regarding SDH / PDH leased lines with capacities greater than 155 Mbit/s and Ethernet over optical fiber leased lines, as well as ancillary services, prices are to be oriented to the costs resulting from the regulatory cost accounting.

On February 13, 2017, AGCom began the fourth cycle of market analysis (Decision 44/17/CONS) and on January 16, 2018, AGCom published the public consultation (Decision 507/17/CONS).

AGCom proposes to:

· confirm the use of the network cap for the definition of the prices of wholesale services of terminal segments of leased lines in SDH / PDH technology and in Ethernet over SDH technology, for the years 2018-2020;

· confirm the invariance of the prices of interconnection links for the years 2018 2020, placing them on equal footing to the prices approved for 2013 and confirmed for the years 2014-2017;

· confirm the BU-LRIC model for the evaluation of the prices of ancillary services and of the optical fiber Ethernet circuits, including the backhauling link (fixed annually in the approval process of the relevant reference offer); and

· remove the imposition of access obligations, for new activations, for the following technologies: i) analog terminating circuits; ii) PDH digital terminating circuits with speeds ranging from 1.2 kbps to 19.2 kbps; iii) Ethernet terminating circuits over SDH (all speeds); iv) Ethernet over SDH interconnection flows (all speeds).

Ø ***Wholesale fixed interconnection markets***

In October 2016, AGCom issued the final decision of the third round of analysis of fixed voice interconnection market, specifically fixed call termination, origination and transit services (Decision 425/16/CONS).

AGCom decided to:

· confirm SMP designation for TIM in the origination market, although this market has been removed from the EC Recommendation;

· set stable fixed call termination rates of 0.043 eurocents/min for TIM and alternative network operators valid until the end of 2018, and 0.041 eurocents/min from January 1, 2019;

· exclude from the scope of price regulation the termination rates of calls originated outside the European Economic Area ( **EEA** ), including the EU member States and Iceland, Liechtenstein and Norway;

· remove the existing obligations imposed on TIM in the wholesale market for district-level transit; and

· remove the obligation imposed on TIM to notify its retail call services that rely on the regulated interconnection services 30 days before the commercialization.

Ø ***Wholesale mobile markets***

On January 22, 2019 AGCom published the final decision on the fifth round of mobile termination market analysis (Decision 599/18/CONS). AGCom determined to:

· identify the twelve operators who provide or are about to provide mobile voice call termination services (MNOs, Iliad included, and Full MVNOs) as having Significant Market Power (SMP);

· confirm the implementation of the cost model specified in Decision 60/11/CONS for the setting of termination rates for the period 2018-2021, also by setting symmetric tariffs for all SMP operators (0.98 c in 2018, 0.90 c in 2019, 0.76 c in 2020, 0.67 c in 2021) on the basis of a WACC equal to 8.55%;

· enforce the price control obligation for the provision of interconnection kits to all SMP operators with retroactive effect from 2018;

· withdraw the cost accounting obligation enforced on TIM, Vodafone and Wind-Tre;

· confirm the absence of a termination price control obligation for calls originating outside the European Economic Area (AEE); however, operators cannot apply higher termination rates than those applied to Italian operators by extra-AEE operators whose tariffs are regulated by the relevant Authorities.

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### 4.3.4 RETAIL MARKETS

v ***Retail Offers***

Despite AGCom assessed retail fixed markets are no longer susceptible of ex ante regulation, AGCom confirmed that TIM is subject to the following obligations regarding its publicly available stand-alone and bundled retail access offers on fixed network: a 30-day notification prior to the commercial launch and an economic and technical replicability assessment by AGCom (i.e. margin squeeze test and availability of adequate wholesale inputs); if the offer does not meet the replicability requirement, TIM must revise the retail offer conditions.

In the draft analysis of wholesale fixed access markets, put under national consultation on January 18, 2019 with Decision 613/18/CONS, AGCom proposed to confirm the economic replicability obligation on TIM s copper and fiber retail access offers and to revise some methodological guidelines (ex. fiber offers will have to be assessed at the level of the single promotion, as already provided for copper offers). Moreover, in case of TIM s network access legal separation, the obligation to inform AGCom about contracts concluded in the scope of public tenders to allow AGCom to verify the replicability of the fixed access offers would be removed.

v ***28-day billing***

Regarding the 28-day billing proceedings, see Note Contingent liabilities, other information, commitments and guarantees , of the Notes to the Consolidated Financial Statements included elsewhere herein.

v ***Guidelines on line termination and switching costs***

On November 2, 2018, AGCOM published the Decision 487/18/CONS setting the new Guidelines on the charges applicable by Operators in case of customers withdrawal.

Law no. 40/2007 ( Legge Bersani ) allowed customers the withdrawal from the permanent contract at any time and provided that the costs they have to pay for the line termination or switching shall be real and economically justified (e.g. deactivation costs for the fixed line).

The Bersani Law was subsequently amended by the Italian Competition Law no.124/2017 and Decision 487/18/CONS aims at implementing the new provisions. However, AGCOM introduces additional charges for operators. In particular:

· Withdrawal in case of line termination or switching: the cost to be paid by the costumer is the minimum between the average rental fee (contract value) and the actual deactivation cost.

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Promotions: in case of early termination (in respect to the duration of the promotion), operators may only charge a share of the discounts proportional to the residual duration of the promotion at the moment of the withdrawal.

- Products with installments offered in conjunction with the electronic communication service: users can decide to pay the remaining installments instead of reimbursing them with a single payment.

v ***Terminal equipment for internet access***

On August 2, 2018 AGCOM approved the final decision (Decision 348/18/CONS) on terminal equipment (modem) for internet access.

With this resolution AGCOM clarifies that the modem is not part of the network and, therefore, the user s freedom of choice must be guaranteed as established by TSM Regulation

From December 1, 2018 the new offers must ensure that the customer can freely choose their terminal.

Decision 348/18/CONS also requires Operators to:

- remove any technical limitations of the modem, to allow the customer to use it for similar services provided by other operators;

- not request additional charges if the modem, which was provided free of charge and not used permanently by the user, is not returned to the operator;
- change the offer of current subscribers who in the past have been obliged to accept the paid provision of a modem, with a free of charge modem supply or, alternatively, give customers the right of withdrawal without any penalty.

TIM is compliant from December 1, 2018 with the free choice of the modem provision, however TIM deems that the aforementioned additional obligations are illegitimate and unjustified; therefore, TIM has appealed the Decision 348/18/CONS before TAR (Tribunale Amministrativo Regionale). The obligation concerning the change of offer of current subscribers, who in the past have been obliged to accept the paid provision of a modem, has been suspended by Council of State pending the TAR final decision which is expected by the end of 2019.

### 4.3.5 THE UNIVERSAL SERVICE

The Universal Service ( **US** ) is a minimum set of services of a certain quality, which must be made available to all customers, regardless of their geographical location in Italy and must be offered at a reasonable price, taking into account specific national conditions. To date, TIM is the only operator obliged by the Code of Electronic Communications (art. 58) to provide the Universal Service under the Universal Service Obligation ( **USO** ) throughout Italy. Currently the services included in the USO are the provision of access at a fixed location and of telephone service, the directory inquiry service and the directories, the availability of public payphones, and the provision of specific measures for disabled users.

A Fund (The Universal Service Fund), established by the Ministry of Communications, is used to finance the net cost for the provision of Universal Service sustained by the designated operator (TIM) by means of contributions paid by the other operators. All the main companies active in the sector, including TIM, must contribute to this fund.

AGCom is responsible for verifying the net cost of the USO provision and to assess whether this amount represents an unfair burden for the operator. The designated operator can receive compensation only if the burden is determined to be unfair.

AGCom assessed the net cost and authorized the funding mechanism until the year 2005 and did not recognize any contribution for the years 2006 and 2007.

The net cost for the provision of USO for the years 2004-2007 have been calculated on the basis of a methodology established by AGCom in 2008 (decision 01/08/CIR) with retroactive effect, which led to a significant decrease of the amount to be financed.

Following Judgment no. 4616/2015, released on October 2, 2015, with which the Council of State overruled Agcom s Decision 1/08/CIR on the application of the new methodological criteria for the calculation of the Universal Service (USO) net cost related to the years 2004-2007, AGCom initiated proceedings for the review of the calculation with Decision 145/17/CONS for the years 2006-2007 and Decision 207/17/CONS for the years 2004-2005. The proceedings are still on-going.

Furthermore, with Decision 88/18/CIR, published on June 21, 2018, AGCom has set the net cost for the year 2008 equal to zero and the net cost for the year 2009 equal to 11.61 million euros which is to be shared by the fixed and mobile operators.

With respect to past litigation, the Council of State, with a decision published on July 7, 2015, rejected the appeal filed by TIM against the decision of the TAR on AGCom s decisions of 2010 by which AGCom had reviewed the proceedings for the years 1999-2000 and 2001-2003. As a result, the Council of State annulled AGCom s Decision of 2010 establishing a possible new renewal of the proceedings for the calculation of the contributions of the years 1999-2000 and 2001-2003.

Following the State Council decision, Vodafone requested TIM to refund the amounts paid for 1999-2000, 2002-2003 and subsequent periods. The proceedings are still pending.

### 4.3.6 CONTRIBUTION FEES FOR THE FUNCTIONING OF AGCOM

TIM and the other operators are required to pay contribution fees to fund the running costs of AGCom. These fees are calculated on the basis of each operator s revenues.

On February 19, 2019, AGCom issued Decision 527/18/CONS on the payment of AGCom contribution for the year 2019 (calculated on the 2017 financial statement data). The guidelines for the calculation of contribution fee are unchanged from the guidelines for the calculation of the 2018 fee. For the year 2019, AGCom decreased the rate from 1.35 per thousand to 1.30 per thousand. On the basis of this new rate, TIM paid, under reserve, about 18.328 million euros.

### 4.3.7 GOVERNMENT S UBB NETWORK STATE AID PLANS

In June 2016, the EU Commission authorized the Italian Government UBB State Aid Plan for a total amount of 4 billion euros aimed at covering almost 25% of the population living in about 7,200 municipalities belonging to the so called UBB white areas (areas in which there is no NGA network available and there is no interest of private operators to deploy it in the near future) of Italy. The 7,200 municipalities are grouped into two clusters, C and D. In Cluster C, 70% of connections have to reach at least 100 Mbit/s download and 50 Mbit/s upload, while the remaining 30% have to reach at least 30 Mbit/s download and 15 Mbit/s upload. In Cluster D, 100% of connections have to reach at least 30 Mbit/s download and 15 Mbit/s upload.

On June 3, 2016 Infratel published a first call for tender of 1.4 billion euros for deploying, and managing under 20-year concession an UBB passive infrastructure (ducts and dark fiber) in the white areas of 6 regions (Abruzzo, Molise, Emilia Romagna, Lombardia, Toscana and Veneto). On March 7, 2017, the first tender was awarded to Open Fiber.

On August 8, 2016, Infratel Italia called for a second tender for the ultrabroadband white areas of 10 additional Italian regions (Piemonte, Valle d Aosta, Friuli Venezia Giulia, Liguria, Marche, Umbria, Lazio, Campania, Basilicata and Sicilia) and in the Trento Autonomous Province, for a total public financing of approximately 1.25 billion euros. TIM decided to not submit any bid. On July 28, 2017, the Second Tender was awarded to Open Fiber.

In August 2017, the *Comitato interministeriale per la programmazione economica* approved the so-called Phase II of the UBB Plan with approximately 3.4 billion euros budget, of which:

- approximately 2.1 billion euros are designated for infrastructural investments in **grey areas** (areas in which there is one NGA network available); and
- approximately 1.3 billion euros are aimed to incentivize UBB demand, through the concession of **vouchers** to families and businesses.

On April 4, 2018, Infratel launched a consultation on the public investment plan in grey areas . According to the document under consultation, the aim of the public intervention in grey areas is to support investment projects in networks able to provide 1 Gbps symmetrical (download and upload) speed, thus achieving a step change with respect to the existing networks. The State aid plan must be yet notified to the European Commission for approval.

On April 19, 2018, Infratel called for a third tender for a total amount of 103 million euros to cover the residual ultrabroadband white areas not covered by private operators plans, in Calabria, Puglia and Sardegna. Tim did not submit any economic offer. On December 19, 2018 the tender was awarded to Open Fiber.

**4.3.8 SPECTRUM**

In October 2018, the Ministry of Economic Development (MISE) s auction for 5G frequencies was concluded. TIM was awarded the following slots:

2 x 10 MHz FDD in the 700 MHz band;

80 MHz TDD in the 3.6- 3.8 GHz band;

200 MHz in the 26.5-27.5 GHz band.

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The slots in 3.6-3.8 GHz and 26.5-27.5 GHz bands are available from January 1, 2019 whilst the slots in 700 MHz band from July 1, 2022 after the freeing of TV broadcasting service. All the frequency rights of use will expire on December 31, 2037.

The total amount of TIM license fee is 2,399.38 million euro which must be paid in several installments over the years 2018-2022 as reported bellow.

| 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|
| 477,473,285 | 18,342,111 | 110,052,665 | 55,026,332 | 1,738,485,953 |

### 4.3.9 ANTITRUST ISSUES

v ***Antitrust in Italy***

Ø ***Legislation on competition***

TIM is subject to Italian competition law, and namely the Law of October 10, 1990 no. 287 ( Provisions aiming at protecting competition and the market ) which set up the AGCM, or Antitrust Authority .

The Antitrust Authority is responsible for:

(i) applying Law 287/1990 and supervising: (a) restrictive agreements; (b) abuses of a dominant position; and (c) concentrations of enterprises;

(ii) applying, whenever the necessary conditions are met, the relevant EU provisions (i.e., Articles 101 and 102 of the Treaty on the Functioning of the European Union);

(iii) applying Legislative Decree September 6, 2005 n. 206 concerning unfair commercial practices; and,

(iv) monitoring conflicts of interest in the case of individuals holding government positions.

In addition, the Antitrust Authority may:

(i) adopt interim measures; and

(ii) enforce commitments binding upon the proposing parties in order to dispel identified anticompetitive concerns closing the investigation without any finding of a violation.

· ***Pending proceedings before the Competition Authority on restrictive agreements and abuses of a dominant position***

Regarding the pending proceedings A514 and I820, see Note Contingent liabilities, other information, commitments and guarantees , of the Notes to the Consolidated Financial Statements included elsewhere herein.

Ø ***Antitrust issues at the European level***

· ***Legislation on competition***

TIM is subject to the European competition law. European competition policy covers anticompetitive agreements (Art. 101 of The Treaty of Functioning of the European Union TFEU), abuse of dominance (Art. 102 of TFEU), mergers (provided that the annual turnover of the combined businesses exceeds specified thresholds, according to Council Regulation (EC) No 139/2004) and state aid (Art. 107 of TFEU).

The EC is empowered by the Treaty to apply these rules and holds a number of investigative powers to that end (e.g. inspection at business and non-business premises, written requests for information, etc.). It may also impose fines on undertakings which infringe the EU antitrust rules. The main rules on procedures on the implementation of the competition rules set forth in Art. 101 and 102 of the Treaty are set out in Council Regulation (EC) 1/2003.

Since May 1, 2004 all National Competition Authorities have also been empowered to fully apply EU Antitrust rules (i.e. Art. 101 and 102 of the TFEU) in order to ensure that competition is not distorted or restricted. National courts may also apply these provisions in order to protect the individual rights conferred on citizens by the Treaty. State aids rules, on the contrary, can only be applied by the EC.

As part of the overall enforcement of EU competition law, the EC has also developed and implemented a policy on the application of EU competition law to actions for damages before national courts. It also cooperates with national courts in order to ensure the coherent application of the EU competition rules within the Member States.

### 4.3.10 TELECOMMUNICATION REGULATORY FRAMEWORK IN BRAZIL

TIM Group s operations in Brazil are subject to the 1997 General Law on Telecommunications (Lei Geral de Telecomunicações **LGT** ) and to a comprehensive regulatory framework for the provision of telecommunications services adopted by the Regulatory Agency for Telecommunications Agência Nacional de Telecomunicações ( **ANATEL** ).

ANATEL is responsible for the regulation and implementation of national policies in matter of telecommunications. It is a quasi-independent body (the relationship with the Ministry of Communication is institutional, but not hierarchical) enjoying financial and operational autonomy and a wide range of functions and powers, to ensure retail customer´s rights, quality of service and competition to avoid concentration of services. The board members have a fixed term, are selected and appointed by the President under approval by the Senate.

ANATEL has the power to impose restrictions, limitations or conditions on concessions, permits or authorizations. ANATEL has the authority to propose and issue legally binding regulations on telecommunications service providers. The rules issued by ANATEL are subject to periodic updates. Any proposed regulation or action by ANATEL is subject to a period of public consultation, which may include public hearings, and can be challenged in Brazilian courts.

ANATEL privatized the former public monopolistic operator and progressively opened the market to competition, in addition to promoting universal access to basic telecommunications fixed services.

With regard to the operational activity of TIM Brasil, ANATEL developed regulations for mobile communication services (Serviço Móvel Pessoal or **SMP** ), fixed communications services (Serviço Telefonico Fixo Comutado or **STFC** ) and data transmission and multimedia services (Serviço de Comunicação Multimídia or **SCM** ).

In 2010 virtual mobile operators were allowed to enter the market upon commercial agreements with the established operators.

In 2016 and 2017 ANATEL issued certain regulations that are particularly relevant to TIM Brasil s operations, including: Resolution No. 663/2016, which modified rules of the MVNO Regulation; Resolution No. 667/2016, which approved the General Regulation of Accessibility in Telecommunications Services of Collective Interest; Resolution No. 668/2016, which modified the STFC Regulation; and Resolution No. 671/2016, which approved the Regulation on the Use of the Radiofrequency Spectrum and modified the Regulation on the Collection of Public Price for the Right of Use of Radiofrequencies and the Regulation on the Imposition of Administrative Sanctions; Resolution No 683/2017, which disciplines the obligation to share support infrastructure for the provision of telecommunications service, including towers poles, towers, masts, cabinets, ducts, conduits, surface structures and suspended structures.

Throughout 2018, Anatel enacted several impotant regulations, such as: (i) Resolution No 693/2018 which approved the new General Interconnection Regulation (RGI) which revoked the General Interconnection Regulatory Framework enforced by ANATEL in 2005; (ii) Resolution No 694/2018 which approved the new General Plan for Competition Targets (PGMC), updating the tools for market analysis and identification of operators with market power and imposition of ex-ante obligations; (iii) Resolution No 695/2018 which approved the new Public Price for the Right to Use of Radio Frequencie (PPDUR) establishes two calculation basis, one for renovation of RF and other for license acquisition; (iv) Resolution No 702/2018 which approved the new Public Price for the Right to Explore Satelites and Telecommunication Services reducing the authorization fee to R$ 400,00 for all telecommunication service; and (v) Resolution No 703/2018 which approved the Spectrum Use Management, which set up a new cap for Spectrum usage limits.

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v ***Authorizations***

ANATEL carried out the privatization of the former public monopoly operator and gradually opened the sector to competition, in addition to fostering universal access to basic telecom fixed services (STFC). According to the General Telecommunications Law and to the regulations issued by ANATEL, licenses to provide telecommunications services are granted either under the public regime, by means of a Concession or a Permission, or under the private regime, by means of an Authorization. Only certain fixed-line service providers are currently operating under the public regime (Telefónica, Embratel, CTBC, Sercomtel and Oi, commonly referred to as Concessionaires ). All the other telecommunications services providers in Brazil are currently operating under the private regime, including all the mobile and data service providers.

Since the launch of GSM mobile services in 2002, four main players operate in the mobile market (Claro, Vivo, Oi and TIM) and compete nationwide. Third generation mobile services were introduced in 2008 while fourth generation mobile services started in 2012.

The authorizations for fixed and mobile services give the TIM Group (which operates under the brand name TIM Brasil) coverage of the entire country of Brazil allowing it to provide fixed, mobile, long distance and data services.

The rules require that all telecommunications services operators allow network access to any interested party to provide value-added services, without discrimination, unless technically impossible. The voice service providers can also provide value-added service through their own networks.

v ***Interconnection rules***

Telecommunication operators must publish a public interconnection offer highlighting both economic and technical conditions and are subject to the General Interconnection Regulatory Framework enforced by ANATEL in 2005. In May 2012, ANATEL approved a new regulation which, from January 2014, requires the application of the Bill and Keep system for local fixed termination rates, *i.e.*, operators will take rights of tariffs generated on their networks, and no interconnection remuneration will be owed for local calls between two different networks.

Until 2016, the interconnection charges for fixed network ( **TU-RL** : Tarifa de Uso da Rede Local) amount to a percentage of retail prices for the incumbent operators. Alternative operators (including TIM) can apply asymmetrical interconnection rates exceeding up to 20% the one applied by the incumbents. As from 2016, the fixed interconnection rates have been following a cost oriented approach.

In July 2018, ANATEL approved the new General Interconnection Regulation which revoked the General Interconnection Regulatory Framework enforced by ANATEL in 2005.

The values of mobile termination rate (called Value to Use the Mobile network VU-M ) are freely negotiated by operators. The National Regulatory Authority has, however, arbitration power in case of disagreement and it can determine a reference value according to criterion set up by regulation. From January 2013, the reference values set by ANATEL comply with a glide path , which led to cost orientated values starting from 2016 until 2019 only to SMP operators. On February 24, 2017, considering the glide path provided in Act No. 6,211/2014, mobile termination call values (VU-M) were again reduced, depending on the Plano Geral de Autorizações do Serviço Móvel Pessoal ( PGA-SMP ) Region, to approximately 0.03 (three cents) reais and, on February 24, 2018, it was reduced to 0.01 (one cents) reais.

On December 18, 2018, Anatel published the corresponding Acts No. 9,019/2018, 9,020/2018 and 9,021/2018, which determined the specific reference rates effective as of February 2019.

v ***General Competition Plan***

In November 2012, ANATEL published the General Plan for Competition Targets (the PGMC ), introducing tools for market analysis and identification of operators with market power and imposition of ex-ante obligations.

The decision opens the networks of the operators with SMP to unbundling and wholesale broadband access. It also improves transparency measures through the creation of a Supervisory Board to ensure the respect of the wholesale service quality levels.

In each market, ANATEL imposed a set of asymmetrical obligations to operators having SMP.

In the fixed access market an access obligation on copper networks (e.g., Leased Lines, bitstream and full unbundling) for the vertically integrated, fixed operators having SMP (Oi, Telefónica and Telmex) was introduced.

In July 2018, ANATEL published the new PGMC reviewing some of its points and set up two new markets: (i) interconnection for telephone traffic in fixed networks; and (ii) high capacity data transport. TIM Brasil has been identified as having SMP in the wholesale markets of mobile termination, national roaming, and high capacity data transport (in five municipalities). The measures applied to a SMP operator in those markets include:

· a glide path on mobile termination rates based on a price cap system and maintenance of partial Bill & Keep until the next revision of PGMC;

· an obligation to offer the service of national roaming to operators not having SMP based on a price cap system.

· an obligation to offer high capacity data transport based on a price cap system.

As from new PGMC, alternative operators can t apply asymmetrical interconnection rates exceeding up to 20% the one applied by the incumbents. As from 2016, the fixed interconnection rates have been following a cost oriented approach.

Due to such classification, we are subject to increased regulation under the PGMC, which could have an adverse effect on our business financial condition, results of operations and compliance with regulations.

Ø **Cost models implementation**

In 2005, ANATEL issued a ruling for Accounting Separation and Cost Accounting . This ruling introduced the obligation to present the Accounting Separation and Allocation Document ( Documento de Separação e Alocação de Contas **DSAC** ) for license holders and groups holding SMP in the fixed and/or mobile network interconnection and wholesale leased lines markets ( Exploração Industrial De Linha Dedicada **EILD** ). Operators, including TIM, are providing ANATEL with the requested information since 2006 for fixed services and since 2008 for mobile services.

In July 2014, ANATEL published the final decision regarding the costing models to set the wholesale reference values for the fixed and mobile access and interconnection services, as well as the reference values for the Leased Lines (Industrial Exploitation of the Dedicated Line **EILD** ).

As from 2016, Fixed Termination Rates ( **FTRs** or **TU-RL** ) and Mobile Termination Rates ( **MTRs** ) are cost oriented to achieve the efficient cost level based on BU-LRIC model in 2019. For EILD, the efficient cost level will be reached in 2020.

ANATEL signaled that all products (not only call termination rates and Leased Lines) will be cost oriented from the revision of the PGMC. In October 2016, all operators were required to answer a Data Request from ANATEL, which intended to raise the necessary data to update the cost model for all the products in the PGMC, such as national roaming and passive infrastructure.

Ø **Mobile interconnection rate glide path**

In November 2012, TIM Brasil, along with other national mobile operators Vivo, Claro and Oi, were identified by ANATEL as having Significant Market Power (SMP) in the wholesale mobile termination market.

The remedies applied to SMP mobile operators included a glide path on mobile termination rate (VU-M), based on a price cap system.

In July 2014, ANATEL published a final decision regarding the cost model and the reference values of the mobile termination rates that will apply over the period from 2016 to 2019 for SMP operators. For 2016, MTRS were set with a Top Down methodology, and 2017-2018 MTRs will be based on linear progressive reductions until convergence to the BU-LRIC model is reached in 2019. The 2019 MTR (based on a full LRIC cost model) of 0.017 reais/min. (0.47 eurocents), will be lower than the current European MTR average of approximately 1.1 eurocents, although the latter is based on pure LRIC cost model.

Under the glide path of reductions defined by ANATEL, from February 2016, SMP operator MTRs (TIM Brasil, Vivo, Claro and Oi) are about 0.10 reais/min. (2.7 eurocents) on average. These termination rates represent a decrease of 37% relative to 2015 rates.

Between operators with SMP a full billing scheme is applied (i.e. each operator charges the total amount of the traffic terminated on its network). Conversely, between SMP and non SMP operators, an asymmetric scheme applies (so called partial bill&keep ): each operator only pays the portion of the terminated traffic on the other network that exceeds a threshold percentage determined by the regulator with respect of the total traffic exchanged at the interconnection. Until February 2015, this threshold was set at 80% (i.e. a non SMP operator pays only if the terminated traffic on the SMP operator network is more than 80% of the total traffic exchanged at the interconnection).

According to the previous rules, by February 2015, the partial bill & keep threshold between SMP and non SMP operators would have decreased to 60% and from February 2016 the full billing scheme would have been adopted. To harmonize the evolution of the values of mobile interconnection with the introduction of cost-oriented values, in February 2015 the regulatory authority (ANATEL) postponed to 2019 the introduction of the full billing scheme in the interconnection between operators with market power and without market power, with a progressive decrease of the mentioned threshold over the next years.

However, as mentioned before, the last revision of PGMC in 2018, determined that partial Bill and Keel will be apply until the next revision of PGMC.

Ø **Lower fixed to mobile call prices for incumbent operators**

Under the Brazilian regulation, MTR reductions must translate into reductions in retail fixed to mobile call prices. Accordingly, ANATEL established new fixed to mobile retail call rates for fixed telephony concessionaries reflecting the lower mobile termination rates applicable starting on February 25, 2016.

Ø **Allocation of the 700 MHz band**

The auction for the allocation of the 700MHz band (698-806 MHz), the provision of the fourth generation mobile services and high speed internet was held in September 2014.

TIM Brasil, Claro and Vivo were granted three of the four auctioned national blocks of 10 + 10 MHz. TIM Brasil offered 1,947 million reais. The Auction also ordered the winning bidders to constitute an entity responsible for the spectrum clean-up process. A total amount of 3.6 billion reais is designated for the completion of the process and TIM shall pay 1,199 million reais.

The frequencies will be available in all Brazilian cities that could face interference in simultaneous TV and Long Term Evolution ( **LTE** ) operations within 9 months of the complete switch-off of analogue television channels.

The initial forecast contemplated 5,570 cities with a switch-off in 2018, however, Ministry Ordinance nº 3493/2016, established that:

· approximately 1,500 cities can have an immediate LTE activation since the frequencies are already free;

· approximately 2,700 cities only need analog channel relocation (switch-off not necessary now); and

· approximately 1,400 cities would have a switch-off by 2018.

Bid winners were required to cover the costs for the implementation of the measures to overcome any spectrum interference and the expenses resulting from the reallocation of Digital TV channels.

In December 2014, TIM acquired the 718-728 MHz and 773-783 MHz sub-bands with national coverage; these authorisations are valid until 2029. These sub-bands are only partially available for mobile operation because they remain in use by broadcasters and ANATEL s approval required for their usage is still pending. The mobile operations on those sub-bands may only begin after the reallocation of broadcasting channels and the following approval by ANATEL and interference mitigation.

Since 2016, the spectrum of 5,089 municipalities have already made available for mobile operation, including all Brazilian capitals. These municipalities represent 91.84% of the Brazilian population (187.8 million). Currently about 2,859 cities are in operation.

**Spectrum auction in the 1800 MHz, 1900 MHz, and 2500 MHz bands**

On April 19, 2016, ANATEL s auction Committee assigned the multi-band local spectrum (135 MHz in the 1800 MHz, 1900 MHz, and 2500 MHz bands, including 60 MHz of unpaired Time Division Duplex spectrum) auctioned in December 2015 for mobile and fixed-wireless broadband services.

TIM was awarded Frequency Division Duplex ( FDD ) spectrum in the 2500 MHz band enabling the provision of 4G/LTE services in the metropolitan areas of Recife and Curitiba. Authorization Terms were signed in July 2016 for 15 years, and can be renewed for an additional 15-year term.

TIM and other mobile operators (Vivo, Claro and Oi) were eligible to bid for spectrum in 1800 MHz band since the publication of Resolution No 703/2018, which set up a new cap for Spectrum usage limits.

Ø **Marco Civil de Internet**

The Marco Civil Internet , which went into effect in June 2014, constitutes a kind of Constitution on the use of the Internet in Brazil.

Key topics covered in the new regulations include net neutrality, collection, use and storage of personal data, confidentiality of communications, freedom of expression and the treatment of illegal, immoral or offensive contents.

The Marco Civil has been elaborated upon by the issuance of a government decree of implementation and enforcement. The ministry s decree (issued on May 11, 2016) addresses three main aspects:

- clarification of the scope and implementation of the net neutrality rules;
- implementation of the rights and obligations for the protection of personal data; and
- governance of the Marco Civil, including authorities in charge of its enforcement.

The decree went into effect on June 10, 2016.

In August, 2018, the Brazilian president passed Law No. 13,709/2018, which altered the Internet Framework and established a comprehensive data protection system that applies across multiple economic sectors and contractual relationships (*Lei Geral de Proteção de Dados*), or the LGPD. LGPD has detailed rules and obligations regarding the collection, processing, storage and use of personal data and will affect all economic sectors, including the relationship between customers and suppliers of goods and services, employees and employers and other relationships in which personal data is collected, whether in a digital or physical environment. In December, 2018, Provisional Measure 869/2018 passed by the former Brazilian president amended Law 13,709 to create the National Data Protection Authority, within the structure of the Presidency of the Republic, which implies in a larger control by the State and to, among other topics, extend to 24 months the entry into force of the Law, by which date (August 2020) all legal entities will be required to adapt their data processing activities to these new rules. Any additional privacy laws or regulations enacted or approved in Brazil or in other jurisdictions in which we operate could seriously harm our business, financial condition or results of operations

Ø **Review of the current regulatory model for the provision of telecom services**

The Brazilian government aims to review the 1997 General Telecommunication Law and to transform the old fixed telephony Concessions into Authorizations, modifying the relevant and related obligations.

On April, 11, 2016, following a public consultation that closed on January 15, 2016, the Ministry of Communications issued guidelines for ANATEL on how to carry out this transformation and move to a more market-oriented licensing approach.

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The Ministry recommended that public authorities should promote access to broadband service at affordable costs and levels, putting broadband at the center of public policies.

ANATEL is directed to:

- propose concrete rules and criteria to enable the phasing-out of concessions;
- highlight the consistency of the new licensing rules with the existing infrastructure coverage obligations;
- ensure service provision (including broadband) in less attractive economic areas;
- give incentives to concessionaires to migrate to the new licensing framework;
- lessen the universal service obligations for fixed telephony;
- schedule the phasing-out of the retail price control over retail fixed telephony services;
- withdraw recurring licensing fees;
- schedule the phasing out of the asset reversion scheme (foreseeing that the network assets used to provide services under a concession must be returned to the state upon the expiry of the concession); and
- establish suitable mechanisms to ensure regulation compliance control.

As a result of the on-going debate regarding the licensing regime, ANATEL was tasked with reviewing concession contracts by December 2016. However, after the publication of Resolution 673, approved on December 30, 2016, the deadline for reviewing these contracts was postponed to June 30, 2017, notwithstanding revised concession contracts have been not signed yet.

Additionally, a Bill of Law (PLC Projeto de Lei da Câmara 79/2016) is under review, which amends Law 9.472/1997 (LGT), allowing ANATEL to change the licensing model of telecommunications service. The concession agreement shall be replaced by an authorization form following ANATEL s approval. ANATEL is responsible for attesting the criteria of effective competition and proof of fulfillment of universal service targets in the provision of Serviço Telefônico Fixo Comutado or Fixed Switched Telephony Service ( **STFC** ).

This Bill also changes radiofrequency rules, establishing subsequent and unlimited renewals of up to 20 years and creates Spectrum Secondary Market, allowing Radiofrequency trading among players.

The Bill has been approved by the Lower House and the Senate but has not been approved at the presidential level. On December 22, 2016, a number of senators from opposition parties filed a petition for writ of injunction ( *Mandado de Segurança* ). Legislative discussion returned in February 2017 and the Bill of Law now awaits Senate approval.

The bill awaits a vote in the Senate. Even if the Senate approves the bill without changes in connection with the proposal approved by the House of Representatives, Presidential approval will be required.

Additionally, in 2018, entered into force the Conectivity Plan Decree (Decree No 9612/2018) which updates and consolidates, in a single instrument, the public policies for the telecommunications in Brazil. The Decree establishes a series of guidelines for execution of terms of conduct adjustment, onerous granting of spectrum authorization and regulatory acts in general which includes: (i) expansion of high capacity telecommunications transport networks; (ii) increased coverage of mobile broadband access networks; and (iii) broadening the coverage of fixed broadband access network in areas with no internet access offer through this type of infrasctructure. It also establishes that the network implemented from the commitments will be subject to sharing from its entry into operation, except when there is appropriate competition in the respective relevant market.

This decree repealed Decree No. 4,733 / 2003, which provided for public telecommunications policies; Decree No. 7,175 / 2010, which established the National Broadband Plan (PNBL); and Decree No. 8.776 / 2016, which created the Brazil Intelligent Program, a new stage of expansion of the PNBL with actions to universalize access to the Internet and increase the average speed of fixed broadband in the country.

## 4.4 TRANSACTIONS WITH U.S. SANCTIONED COUNTRIES

In accordance with our Code of Ethics and Conduct, we seek to comply with all applicable international trade laws including applicable sanctions and embargoes. Below we discuss our activities related to certain countries that are targets of U.S. economic sanctions: Iran, North Korea, Sudan and Syria (the **Designated Countries**[3]).

**Activities relating to the Designated Countries**

To our knowledge, activities relating to Designated Countries are as follows:

(i) **Roaming Agreements** with local mobile phone operators:

- **North Korea**: none;
- **Iran:** KFZO-TKC (former Payam Kish), Gostaresh Ertebatat Taliya PJS (former Taliya), Rightel Communication, Irancell (**MTN**), Mobile Company of Iran (MCI) and Telecommunication Company of Iran;
- **Sudan**: ZAIN Sudan and Areeba (former MTN Sudan);
- **Syria**: MTN Syria (former Spacetel Syria 94 and former Areeba) and Syriatel Mobile Telecom SA ( **Syriatel** ).

(ii) **International Carrier Agreements** for the delivery of voice and data traffic from such countries to our networks and from our networks to such countries including in connection with our roaming agreements. To this end, our subsidiary Telecom Italia Sparkle S.p.A. ( **TI Sparkle** ), directly and through its subsidiaries, has agreements with the Telecommunication Company of Iran (**TCI**) in Iran; Sudan TLC (former PT&TG PUBLIC SUDAN), Sudatel Telecom Group, ZAIN Sudan and Canartel in Sudan; and Syrian Telecom Establishment (STE) (Directorate General of Syria) in Syria.

TI Sparkle has an agency agreement with Cypress Corporation DFZCO (a company incorporated in the free zone of the Dubai airport) that promotes the use of voice services towards Syrian Telecom Establishment (**STE**), a company reportedly affiliated with the government of Syria. The agreement provides that we pay this agent based on a fee that is a percentage of revenues we earn.

In addition, TIM S.p.A. has entered into certain agreements for the provision of TLC services (marine radio traffic) with Telecommunication Infrastructure Company of Iran (**TIC**) for services to the Islamic Republic of Iran Shipping Lines.

(iii) **Commercial Sale and Other Agreements**.

In quantitative terms, the impact of all such agreements (roaming, international carrier, commercial sale and other) on the TIM Group consolidated financial statement line items are as follows:

| | **Year ended December 31, 2018 (thousands of euros)** |
|---|---|
| Revenues | 7,794 |
| Expenses | 6,796 |
| Receivables | 28,024 |
| Payables | 28,181 |

***Roaming Agreements***

We operate one of the largest mobile networks in Italy. Through our foreign subsidiaries, we also have large mobile operations in Brazil (Tim Participações S.A. through its subsidiary TIM S.A.). The following is the definition of roaming:

***Roaming:*** *A function that enables wireless subscribers to use the service on networks of operators other than the one with which they signed their initial contract. The roaming service is active when wireless is used in a foreign country (included in GSM network).*

[3] Effective October 12, 2017, the U.S. Government lifted comprehensive sanctions with respect to Sudan and the Government of Sudan, although the State Department has not yet remove Sudan from its list of state sponsors of terrorism. Accordingly, we have included disclosure with respect to Sudan and have included Sudan within the definition of Designated Countries.

**Item 4. Information On The TIM Group** **Transactions With U.S. Sanctioned Countries**

Like all major mobile networks, in response to competition and customer demands, TIM and Tim Participações group have entered into roaming agreements with many foreign mobile networks, in order to allow customers to make and receive calls when travelling abroad.

Roaming agreements, including those relating to the Designated Countries, are on standard terms and conditions. In fact, entering into roaming agreements is an activity carried out in the ordinary course of business by a mobile network operator.

Roaming agreements are, generally, reciprocal. Pursuant to a roaming agreement our mobile customers may, when they are in a foreign country covered by the network (the **Foreign Network** ) of an operator with which we have a roaming agreement, make and receive calls on their mobile using such operator s network. Likewise, when a customer of such Foreign Network is in Italy (or Brazil), such customer may make and receive calls using our networks or the networks of other mobile operators in Italy (or Brazil) if this foreign Network has an International Roaming Agreement with other Italian (or Brazilian) Operators.

Calls made and received by our customers through the services of the Foreign Network are billed by the Foreign Network to us at the roaming rate agreed upon in the applicable roaming agreement. We then bill our end customers according to the specific tariff plan of the subscription they have signed with us. Similarly, we bill the Foreign Network at the roaming rate agreed upon in the applicable roaming agreement. The Foreign Network will bill its clients for the calls made and received using our networks according to their specific offer to their customer base. Roaming contracts do not, generally, contemplate other fees or disbursements.

The purpose of all of these roaming agreements is to provide our customers with coverage in areas where we do not own networks. In order to remain competitive and maintain such coverage, we intend to continue maintaining these agreements.

In 2018, our total revenues from roaming agreements with networks of the Designated Countries are detailed as follows:

| | **Year ended December 31, 2018 (thousands of euros)** |
|---|---|
| North Korea | |
| Iran | 5 |
| Sudan | 10 |
| Syria | 5 |
| **Total revenues from roaming agreements** | **20** |

In 2018, our total charges from roaming agreements with networks of the Designated Countries are detailed as follows:

| | Year ended December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 82 |
| Sudan | 90 |
| Syria | 14 |
| **Total charges from roaming agreements** | **186** |

As of December 31, 2018, our total receivables from roaming agreements with networks of the Designated Countries are detailed as follows:

| | As of December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 694 |
| Sudan | 52 |
| Syria | 45 |
| **Total receivables from roaming agreements** | **791** |

As of December 31, 2018, our total payables from roaming agreements with networks of the Designated Countries are detailed as follows:

| | As of December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 2,692 |
| Sudan | 53 |
| Syria | 90 |
| **Total payables from roaming agreements** | **2,835** |

The amounts of revenues, charges, receivables and payables are *de minimis* when compared to our consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

***International Carrier Agreements with the Designated Countries***

In the modern telecommunication business, when traffic from a specific network is placed with, or transported through, our networks, we receive a fee from the incoming network. Likewise, when traffic coming from one of our networks is placed with, or transported through, another network, we owe a fee to such network.

The purpose of these agreements is to allow the uninterrupted exchange of international traffic. Consequently, we intend to continue maintaining these agreements.

In 2018, our total revenues from traffic from networks located in the Designated Countries to our networks are detailed as follows:

| | Year ended December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 438 |
| Sudan | 1,580 |
| Syria | 4,649 |
| **Total revenues from traffic** | **6,667** |

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**Item 4. Information On The TIM Group** **Transactions With U.S. Sanctioned Countries**

In 2018, our total charges from traffic to networks in the Designated Countries from our networks are detailed as follows:

| | Year ended December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 5 |
| Sudan | 1,936 |
| Syria | 4,669 |
| **Total charges from traffic** | **6,610** |

As of December 31, 2018, our total receivables from traffic from networks located in the Designated Countries to our networks are detailed as follows:

| | As of December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 5,493 |
| Sudan | 11,511 |
| Syria | 8,042 |
| **Total receivables from traffic** | **25,046** |

As of December 31, 2018, our total payables from traffic to networks in the Designated Countries from our networks are detailed as follows:

| | As of December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 5,151 |
| Sudan | 11,832 |
| Syria | 8,363 |
| **Total payables from traffic** | **25,346** |

Such amounts of revenues, charges, receivables and payables are *de minimis* with respect to our consolidated revenues, operating expenses, trade receivables and trade payables, respectively.

***Commercial Sale and Other Agreements***

TI Sparkle provides institutional access to Internet to Syria and Sudan by means of Seabone IP ports and data transmission capacity through international cable systems.

On December 20, 2016, Olivetti and Faravaran Hamgam, a local Iranian company, executed an agreement for the local production and sale of Olivetti s electronic cash registers and the provision of assistance in connection with these machines in Iran. Faravaran Hamgam will locally assemble Olivetti products through one of its own controlled companies. Production has not yet started.

In September 2016, TI Sparkle reached an agreement with TCI for the development of a Point of Presence ( **POP** ) of Sparkle Internet backbone in Iran and the provision of IP Transit services from Sparkle to TIC. Currently the POP is not open.

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In 2018, our total revenues from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

| | Year ended December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | |
| Sudan | 202 |
| Syria | 905 |
| **Total revenues from commercial sale and other agreements** | **1,107** |

As of December 31, 2018, our total receivables from Commercial Sale and Other Agreements with the Designated Countries are detailed as follows:

| | As of December 31, 2018 (thousands of euros) |
|---|---|
| North Korea | |
| Iran | 502 |
| Sudan | 333 |
| Syria | 1,352 |
| **Total receivables from commercial sale and other agreements** | **2,187** |

* * *

**Disclosure pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 (ITRSHRA)**

Other than the disclosure above on activities related to the Designated Countries, to our knowledge, none of our sales of products and services are required to be disclosed pursuant to ITRSHRA Section 219.

## 4.5 GLOSSARY OF SELECTED TELECOMMUNICATIONS TERMS

The following explanations are not intended as strict definitions, but to assist readers to understand certain terms as used in this Annual Report.

**2G (second-generation Mobile System).** Second-generation mobile systems using digital encoding and including GSM, D-AMPS (TDMA) and CDMA. 2G networks are in current use all over Europe and other parts of the world. These systems support voice and limited data communications as well as auxiliary services such as fax and SMS.

**3G (third-generation Mobile System).** Third-generation wireless system, designed to provide high data speeds, always-on data access, and greater voice capacity. 3G networks allow the transfer of both traditional communication services (telephony, messaging) and data (such as downloading Internet information, exchanging email, and instant messaging). The high data speeds, measured in Mbps, are significantly higher than 2G, 3G networks technology enable mobile video, high-speed internet access. The standards of the 3G technology include UMTS, based on WCDMA technology (quite often the two terms are often used interchangeably) and CDMA2000.

**4G (fourth-generation Mobile System).** Fourth-generation systems are designed to provide, in addition to legacy services, mobile broadband Internet access to several kinds of devices such as laptops with wireless modems, smartphones, tablets, and other mobile devices. Current and future applications include mobile web access, IP telephony, gaming services, high-definition mobile video, video conferencing, Internet of Things and cloud computing applications. 4G standards include LTE e LTE-A (LTE-Advanced). LTE offers a higher spectral efficiency in bits per Hertz and download bandwidth up to 150 Mbit/s per cell reducing the latency time. LTE enables services that require high interactivity (e.g., gaming, video conferencing). A further development of LTE, called LTE Advanced, is being implemented and will allow reaching even higher bitrates in download.

**5G (fifth-generation Mobile System).** 5G indicates the fifth generation wireless systems that will be introduced on market starting from 2020. International standard for a like 3GPP (3rd Generation Partnership Project) and ITU Commission (International Telecommunication Union) are defining characteristics and standards of 5G future connectivity and the first field trials will be launched in 2018.

The main elements of the 5G network will be:

- bit-rate significantly higher than 4G in larger spectrum bandwidth (up to tens of Gbit/s over hundreds of MHz) to ensure greater quality of service, for innovative services such as video download and live streaming;
- ultra-low latency in the order of milliseconds;
- possibility of connecting simultaneously hundreds of thousands of objects (Internet of Things): wearable technologies, automatic systems for traffic control, assisted driving for vehicles, home automation;

· ability to connect moving vehicles at higher speeds.

**Access charge.** Amount charged by national operators for the use of their network by customers of other operators. It is also known as an interconnection charge .

**ADS (American Depositary Shares)/ ADR (American Depositary Receipt).** Equity shares used for the listing of TIM ordinary and savings shares on the NYSE (The New York Stock Exchange). Each ordinary ADS represents to 10 TIM ordinary shares.

**ADSL (Asymmetric Digital Subscriber Line).** Technology that transforms, through a modem, the traditional copper fixed line into a high-speed digital connection for the transfer of multimedia data. ADSL is an asymmetrical technology used to achieve broadband transmission.

**Agile.** In software engineering, the expression Agile (or agile software development) refers to a set of software development methods that are opposed to traditional models such as cascade models (e.g., waterfall model); Agile methods propose a less structured approach focused on the objective of delivering to the customer quickly and frequently software that is functional and with best quality. Among the practices promoted by agile methods, today in general referred to the Project Management of products (not exclusively software), there are: the setup of small, poly-functional and self-organized development teams, iterative and incremental development, adaptive planning, and the direct and continuous involvement of the customer in the product development process.

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**Item 4. Information On The TIM Group** **Glossary of Selected Telecommunications Terms**

**AI (Artificial Intelligence).** Ability of a technological system to solve problems and carry out tasks and activities typical of the mind and human behavior. In the computer science field, it is the discipline that deals with creating machines (hardware and software) able to act autonomously (solve problems, perform actions, etc.).

**API (Application Programming Interface).** It is a set of procedures used to interact with other programs and expand their functionalities. APIs are software libraries available for a given programming language that extend some functionality of the platforms making them interoperable and open to different implementations.

**AltNets (Alternative Network Operators).** Companies, other than the incumbent operators, that operate telecommunications systems in a national market.

**Analog transmission.** Legacy non-digital transmission technology where the representation of voice, video or other information is done by a continuous signal for which the time varying feature (variable) of the signal is a representation of source time varying quantity.

**ATM (Asynchronous Transfer Mode).** A network protocol through which the transfer of data is achieved using the encapsulation of fixed length (53 bytes) data units, called cells, instead of variable-length packets as is the case in packet-switched networks.

**Backbone.** Portion of the telecommunication network that supports long-distance connections which aggregates large amount of traffic and from which the connections for serving specific local areas depart.

**Big Data.** Big data is a term used to describe the set of technologies and methods for massive data analysis. The term indicates the ability to extrapolate, analyze and relate a huge amount of heterogeneous, structured and unstructured data, to discover the links between different phenomena and predict the future ones.

**Bit-stream access.** Wholesale interconnection services which consist in the supply by a dominant telecommunications operator (incumbent) of access transmission capacity between an end customer and an interconnection point of another operator (OLO).

**Blockchain.** Blockchain represents an innovative technology for structuring data and information with sharing on the network; a blockchain system is similar to a distributed database or virtual register, structured as a chain of blocks (hence the term blockchain) containing the transactions, and whose validation is entrusted to a consensus mechanism distributed on all the nodes of the network participating to the chain. The main distinguishing characteristics of blockchain are the immutability of the registry, the traceability of transactions and the security based on advanced cryptographic techniques. Blockchain technologies are currently used to support global supply chains, financial transactions (e.g., BitCoin), accounting assets and distributed social networks.

**BRAS (Broadband Access Server).** Also named BNG, BRAS is equipment that handles the access sessions of fixed broadband users. It authenticates the users, terminates the logical links originated at users premises, produces user accounting data, may apply policies and QoS (Quality of Service) techniques (for the description or measurement of the overall performance of a service).

**Bottom-up.** The bottom-up approach develops a cost accounting model beginning with the expected demand in terms of subscribers and/or traffic. It then assesses the network design and related costs based on the network engineering model.

**Broadband services.** Broadband includes network technologies which achieve a transmission speed of 2 Mbit/s. These speeds are made available on both the copper fixed-line, through ADSL technology, and mobile network, starting from third generation systems. Broadband services include voice and data. Data services comprise high speed internet access, interactive video and audio files, point to point and multi point video services (video calling and video conferencing), video on demand (download and streaming) and television programs.

**Broadcast.** Simultaneous transmission of the same information to all nodes and terminal equipment of a network.

**BSC (Base Station Controller).** Control node of the 2G radio access network and interface with the MSC switching node. It has the task of supervising and controlling radio resources, for both call or data set up and maintenance.

**BSS (Business Support System).** The system used by network operators to manage business operations such as billing, sales management, customer-service management and customer databases.

**BTS (Base Transceiver Station).** Radio base station transmitting and receiving the GSM radio signal to cover an area, split in one or more cells) by using one or more radio transceivers (TRX). BTS performs also GSM communications ciphering/deciphering.

**Bundle.** Commercial offer including multiple telecommunications services (voice, broadband internet, IPTV, other) by an operator under the same commercial brand. *Dual Play* bundle includes fixed telecommunication services and broadband internet; *Triple Play bundle* is the dual play bundle integrated with IPTV; *Quadruple Play bundle* is the bundle triple play integrated with mobile telecommunication services.

**Caching.** Web-content caching (videos, HTML pages, images, etc.) is a technology that allows for the reduction of bandwidth usage and content access time. A cache stores copies of documents requested by users, so that subsequent requests can be satisfied by the cache itself, under appropriate conditions.

**Carrier.** Telecommunication services operator, providing a transport of communication services by means of its physical telecommunication network.

**Carrier Aggregation.** Technology used to aggregating more radio carriers to increase the transmission speed over a wireless network.

**CCA.** In a current cost accounting (CCA) approach, the operator s asset base is annualized based on the gross replacement cost of the assets. CCA belongs to the family of constant annualization methodologies where the depreciation share is stable and the cost of capital share decreases over time, resulting in decreasing annuities. Unlike historical cost accounting, in current cost annualization methods the amortization is adjusted according to variations in the price of the assets being considered due to technical progress and general variations in price (inflation).

**CDMA (Code Division Multiple Access).** A channel multiple access method used in radio communication. First radio systems based on CDMA were developed by Qualcomm, and commercially introduced in 1995. It enables the simultaneous transmission on the same channel of multiple signals, each of which is uniquely coded to distinguish it from the other messages.

**CDN (Content Delivery Networks).** Are content distribution systems (especially large multimedia contents, such as IPTV) managed by a Service Provider for the provision of audio streaming services and video, with better quality towards customers.

**Cell.** Geographical portion of the territory illuminated by a radio base station.

**Central Office.** A building where the copper wires or optical fibers that make up the access network, reaching the customers, originate from. It hosts equipment for telephony services ( Stadio di Linea in TIM terms), broadband services (DSLAM) and possibly ultrabroadband services (OLT). Some COs also host equipment of higher hierarchical rank (SGU for telephony, router for data services), and those COs also collect traffic from the other COs which are not so equipped.

**Cellular.** A technique used in mobile radio technology to use efficiently the same spectrum of frequencies in a network. Controlled power radio transmitters are used to cover a cell (i.e., a limited area) so that the spectrum used for it can be reused without interference in other parts of the network.

**Channel.** The portion of a communications system that connects a source to one or more destinations by means of transmission media and optical, electric, electromagnetic signals.

**Closed User Group.** Groups of customers who can make and receive calls or messages within the group at special conditions (e.g., restricted access, dedicated pricing)

**Cloud.** The term Cloud is used as an abbreviation of the concept of Cloud Computing , a model of consumption of processing resources (e.g., networks, servers, memory, applications and services) through the network. With the Cloud, the end customer, otherwise defined as cloud consumer, is allowed widespread, easy and on-demand access to a shared and configurable set of resources that can be quickly acquired and released with minimal management or interactions with the service provider. The Cloud model is made up of five essential features: 1) Self Service on customer request, 2) broad-network access, 3) resource sharing, 4) elasticity/automation in resource demand, and 5) certified SLAs, three service models (see also SaaS, PaaS and IaaS) and four distribution/deployment models (private, public, hybrid and communities).

**Cogeneration.** Cogeneration is the combined production of electrical (or mechanical) energy and useful heat from the same primary source. By using the same fuel for two different purposes, cogeneration aims for a more efficient use of primary energy, with associated cost savings especially in production processes where there is a strong overlap between the use of electricity and heating.

**Cognitive Computing.** Advanced artificial intelligence system in which the machines have part of the typical functions of a human brain. Cognitive computing technologies are able to process enormous amounts of information, learn autonomously, interact in human language and reproduce human thought models.

**Community.** A group of people who have some interests in common and communicate via Internet (i.e., via social network).

**Connected Cars.** Connected Cars are vehicles with internet access and sensors for sending and receiving signals, perceiving its surrounding environment and communicating with other vehicles and services.

**Co-siting.** Agreements to share technological sites (for Telecommunications, specifically, sites of access to the network and passive infrastructure) by several operators in order to achieve a more efficient use of network infrastructure in urban and rural areas.

**CPE (Customer Premise Equipment).** An electronic device (terminal, telephone, modem) for telecommunications used on the user s side that is able to connect directly to the geographic transmission network through appropriate interfaces. The connection between the CPE and the network can be realized on physical carrier (optical fiber, telephone twisted pair) or on radio (wireless) carrier.

**CPS (Carrier Pre-selection).** Within the framework of the Equal Access policy guaranteed to all operators, the CPS is a feature of the telephone network that allows to permanently specify the call routing to the chosen operator. This function must be implemented by the access operators in their own plants.

**Cybersecurity.** Cybersecurity deals with the analysis of threats, vulnerabilities and risks associated with internet-connected systems, including hardware, software and data, to protect such systems from attempts to expose, alter, disable, destroy, steal or gain unauthorized access or make unauthorized use of an asset.

**D-AMPS (Digital-Advanced Mobile Phone Service).** A digital version of AMPS (Advanced Mobile Phone Service), the original analog standard for cellular telephone service in the United States.

**DAS (Distributed Antenna System).** DAS is a network of distributed antennas connected to a signal source in order to provide wireless services in a geographical area or indoor. The radiofrequency signal is combined and distributed through an antenna system.

**Data Center.** Data Center is the department of a company that hosts and manages back-end IT systems and data repositories (i.e., its mainframes, servers, databases, etc.). In the past, this type of management and control was in a single physical place, hence the name data center . The development of new distributed computing technologies has inaugurated new management criteria that see more data centers located/distributed at both a physical and virtual level.

**DCC (Digital Contact Center).** DCC is a set of platforms used to connect customers to most appropriate human and virtual customer care agents, via different channels (e.g., voice, web, apps, mail, chat, sms) and to support agents in their interaction with customers (e.g., verbal ordering, back office).

**DCS 1800 (Digital Communication System).** A derivative of the GSM cellular mobile telephone standard. 1800 refers to the frequency used of 1800 MHz. DCS 1800 is the European PCN standard.

**DDoS (Distributed Denial of Service).** A distributed denial-of-service (DDoS) is an attack to a target, such as a server, website or other network resource, and cause a denial of service for users of the targeted resource. A flood of incoming messages, connection requests or malformed packets to the target system forces it to slow down or even crash and shut down, thereby denying service to users or systems.

**Decommissioning.** The disposal of the oldest technological solutions (legacy or obsolete) in order to rationalize and simplify the current Telecommunication networks with the aim of optimizing investments and improving the quality and time-to-market of services.

**DevOps.** DevOps is an agile method of software development that aims at communication, collaboration and integration between developers and operations operators. DevOps is an approach to the development and implementation of applications in a company, such as the release of the product, the testing of the software, and the evolution and maintenance (correction of bugs and minor releases) of the product to increase reliability and security and speed up development and release cycles.

**Digital.** A mode of representing a physical variable such as speech using digits 0 and 1 only. The digits are transmitted in binary form as a series of pulses. These networks, through the use of a technology converting analog signals into digital ones, allow for higher capacity and higher flexibility. Digital systems offer lower noise interference and can incorporate encryption as a protection from external interference.

**DLA (Data Layered Architecture).** An architecture for real-time management of user data in telecoms networks (such as user profiles, etc.). It introduces a separation between a logically centralized data storage layer, taking into account data consistency and availability, and a front-end layer which handles requests coming from network elements.

**DPI (Deep Packet Inspection).** A technology for analysis of live traffic packets which looks deeply into packets payload (i.e., up to application level, rather than just at IP/TCP/UDP headers level). It enables advanced traffic management.

**DSL Network (Digital Subscriber Line Network).** A network technology family that provides wide bandwidth digital transmission at short distances, through the traditional twisted copper pairs from the first switching office to the end user.

**DSLAM (Digital Subscriber Line Access Multiplexer).** DSLAM denotes equipment multiplier of digital access lines able to process digital signals of various clients with xDSL lines and multiply them in a high rate data link to the nodes of the Internet.

**DTT (Digital Terrestrial TV).** Digital Terrestrial Television Broadcasting is a type of broadcasting technology that provides a more effective way of transmitting television services (in terms of number of channels and images quality) using a digital system.

**DVB H (Digital Video Broadcasting Handheld).** DVB H was a standard for the transmission of digital video optimized for mobile networks and handheld devices such as smartphones and cellular phones.

**DWDM (Dense Wavelength Division Multiplexing).** This is a technology for multiplying and transmitting at the same time optical signals with different wavelengths in a single optical fiber in order to increase the available amount of bandwidth.

**EDGE (Enhanced Data for GSM Evolution).** Technology that increases the speed of data transmission of the GPRS, the standard from 30-40 kbit/s to 400 kbit/s in the best radio transmission radio condition.

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**Item 4. Information On The TIM Group** **Glossary of Selected Telecommunications Terms**

**Edge (Network Edge).** A segment of the network lying between access and core, wherein service functions are located (e.g., those performed by BRAS). Depending on the context, it may be quite distributed (e.g., to the level of mobile Base Station), or less distributed (e.g., at the edge of the backbone).

**EEB (Energy Efficiency in Buildings).** International initiative promoted by the World Business Council for Sustainable Development (WBCSD) for research in energy efficiency in buildings in order to reduce the environmental impact and the energy costs.

**EFFC (Extraction Full Free Cooling).** A cooling system for the reduction of consumption without the use of greenhouse gases. The EFFC is based on the principle of free cooling (forced ventilation without the use of air-conditioning), combined with a system to extract the hot air produced by the apparatus and further cooling (adiabatic) of incoming air obtained by exploiting a zone with a high concentration of nebulized water.

**EMF limits (ElectroMagnetic Field limits).** Electromagnetic fields are present everywhere and are generated both by natural sources (e.g., thunderstorms, earth magnetism) and human-made sources (e.g., such as power lines, TV antennas, mobile base stations, microwave ovens). They are known to affect human body in ways that depend on their frequency. For radiofrequency fields, such as those produced by mobile base stations and mobile handsets, the major biological effect is heating of the body tissues. The current view of scientific community, as outlined by World Health Organization, is that while exposure to high levels of EMF are harmful to health, there is no evidence that prolonged exposure to low levels of EMF might be harmful. The definition of what is meant to be a level low enough to be harmless is left to individual countries, however guidelines have been defined by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

For Italy, the exposure limit is 20 V/m. In homes, schools, playgrounds and places where people may stay for longer than 4 hours per day, an attention value of 6 V/m is applied and averaged over any 24 hour period.

**EMS (Environmental Management Systems).** Environmental management systems contribute to the sustainable management of production and support processes and are a stimulus to the continual improvement of environmental performance as they are tools to ensure effective management, prevention and the continuous reduction of the environmental impact in work processes

**eNB (Evolved Node B).** The Radio Base Station in 4G technology, which implements LTE radio interface and manages its radio resources.

**EPC (Evolved Packet Core).** The core segment of a 4G network. It performs management of user mobility, routing of traffic (which in 4G is only packet traffic), policy enforcement, production of accounting data, interconnection with IP networks.

**EPS (External Power Supplies).** External power supplies of equipment.

**eSIM (embedded SIM).** The evolution of the SIM. An Embedded SIM is an integrated circuit embedded directly inside a device and consequently not extractable and not replaceable, but remotely managed through the functionality of the device itself.

**Ethernet:** Family of computer networking technologies for local area networks (LANs) and metropolitan area networks (MANs).

**Exchange.** See Switch.

**Fixed UBB.** Access technologies involving the use of optical fibers, known as FTTx, to provide ultrabroadband connectivity.

**FTTx (*Fiber to the* ).** The term used to indicate any network architecture that uses fiber optic cabling in telecommunications access networks to replace, partially or totally, traditional copper cables. The various technological solutions differ in the point of the distribution network where the fiber connection is made, with respect to the end-user s location. In the case of **FTTC** (Fiber to the Cabinet) the fiber connection reaches the

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equipment (distribution cabinet) located on the sidewalk, from where copper connections are run to the customer; in the case of FTTB (Fiber to the Building) the fiber arrives at the base of the building to a distribution box from where the vertical copper connection starts; in the case of **FTTH** (Fiber to the Home) the fiber connection terminates inside the customer premises.

**FWA (Fixed Wireless Access).** FWA refers to a set of transmission systems developed to exploit specific frequencies of the radio spectrum in order to provide fixed broadband connectivity services (with nominal connection speeds equal to 1 Gbps).

**Gateway.** An interconnection node between networks. A Gateway node may be used to separate networks belonging to different Domains or make functionally different networks interwork through protocol interworking.

**G-FAST (Fast Access to Subscriber Terminal, group G of the ITU-T recommendations**) is a DSL standard, fourth generation on copper, adopted by ITU-T starting from 2014 that allows to reach aggregate Downstream speeds + Up Stream of about 500 Mbit /s up to 100m. and about 800-900 Mbit /s up to 50m. It is therefore a technology with a speed higher than VDSL2 and eVDSL but, being optimized for very short distances, the network devices must be positioned even closer to the customer than the cabinets line, or rather in distribution boxes at or at the base of buildings.

**GRI (Global Reporting Initiative).** The Global Reporting Initiative (GRI) is a leading organization in the field of sustainability. GRI promotes sustainability reporting as a way for organizations to become more sustainable and contribute to sustainable development.

**GGSN (Gateway GPRS Support Node).** Node that acts as a gateway for data traffic between mobile networks (2G and 3G) and the Internet network or private networks.

**GPON (Gigabit capable Passive Optical Network).** A passive optical network (PON) is a network architecture that brings fiber cabling and signals to the home using a point-to-multipoint scheme that, by unpowered fiber optic splitters, enables a single optical fiber to serve multiple premises.

**GPRS (General Packet Radio System).** Packet switched system to efficiently transmit data over 2G cellular networks.

**GRX (GPRS Roaming eXchange for Mobile Operators).** The GRX service allows Mobile Operators to globally interconnect GPRS networks around the world enabling global GPRS roaming coverage.

**GSM (Global System for Mobile Communication).** A worldwide standard for digital cellular telephony working on the 900MHz and 1800MHz bands. It belongs to the Second Generation (2G) of mobile systems.

**HDSL (High-bit-rate Digital Subscriber Line).** Technology of xDSL family, standardized in 1994. It provides up to 8 Mb/s symmetrical over copper.

**HLR** (**Home Location Register**). Database where customer data are recorded. It is part of 2G and 3G systems.

**Home Access Gateway  Access Gateway  Home gateway  Residential Gateway.** Home networking device that is used to concentrate voice/data/video traffic of customers for private TLC networks and to connect devices in the home to the Internet or other WAN.

**Housing.** Leasing of physical space to customers, which is managed within a data center for the installation of their own equipment or servers.

**HSDPA (High-Speed Downlink Packet Access/UMTS Hi Speed  Universal Mobile Telecommunications System).** Evolution of UMTS, which enables broadband mobile data both in Downstream (HSDPA) and Uplink (HSUPA), up to 42 Mb/s and 5.76 Mb/s, respectively.

**IaaS (Infrastructure as a Service).** Through a Cloud IaaS offer (Infrastructure as a Service, see also Cloud models), a consumer acquires from a Cloud Provider in a flexible and dynamic way computing, memory, network resources and other fundamental calculation resources, through which the customer can develop and run arbitrary software, including operating systems and applications. The consumer does not manage or control the underlying Cloud infrastructure, but controls operating systems, memory, applications and possibly, in a limited way, some network components (e.g., firewalls).

**ICT (Information and communication(s) technology).** Broad area concerned with information technology, telecommunications networks and services and other aspects of managing and processing information, especially in large organizations.

**IEEE (Institute of Electrical and Electronics Engineers).** An organization of professional scientists aiming at promoting technology science and research in the field of electrical and electronics engineering and related fields. IEEE also works as a publishing house and standardization body.

**IMS (IP Multimedia Subystem).** The architecture for providing IP Multimedia services (i.e., voice, video and text) communications over IP networks. It comprises all the network elements related to signaling and media flow handling.

**IMSI (International Mobile Subscriber Identity).** The International Mobile Subscriber Identity is a unique identifier associated with a SIM card in cellular networks.

**Interconnection.** The physical and logical connection among public telecommunication networks belonging to different operators, in order to enable users of an operator to communicate with users of the same or a different operator, or to access services provided by another operator.

**Internet.** Global network for networks interconnection based on a common protocol suite, i.e., TCP/IP, which is the language by which connected equipment (hots) are able to communicate.

**Internet of Things.** The extension of Internet to the world of objects (devices, equipment, systems,..etc.), which become recognizable and acquire intelligence due to the fact that they can communicate data about themselves and access aggregate information from other object. There are many fields of applicability including: industrial applications (production processes), logistics and infomobility, to energy efficiency, remote assistance and environmental protection.

**IP (Internet Protocol).** A connectionless data routing protocol, used for data transmission on both public and private networks, in particular over the Internet.

**IPCC (IP Contact Center).** See DCC.

**IP/MPLS (Internet Protocol/Multi Protocol Labeling Switching).** A packet switching protocol to optimize network behaviors of mapping Layer3 (IP) end-to-end data flow to Layer2 traffic between adjacent network nodes.

**IPTV (Internet Protocol Television).** A system that utilizes the Internet Protocol infrastructure to transmit digital television content over a network and deliver it via a broadband Internet connection.

**ISDN (Integrated Services Digital Network).** A narrowband system in which several services (e.g., voice and data) may be simultaneously transmitted end to end in digital form.

**ISPs (Internet Service Provider).** A vendor who provides access to the Internet and World Wide Web.

**ITU (International Telecommunication Union).** An international organization that aims to set telecommunications standards and in the use of radio waves. Founded in 1865 in Paris, it is one of the specialized agencies of the United Nations and its head office is in Geneva.

**Jitter.** In electronics and telecommunications, jitter indicates the variation of one or more characteristics of a signal, such as amplitude, frequency, phase, transmission delay. The causes leading to jitter must be kept at the center of the design of electronic systems and components in which signal integrity is a strict constraint.

**LAN (Local Area Network).** A private network that covers a local geographic area and provides public telecommunications services as well as interconnection between personal computers.

**Latency.** The latency of a system can be defined as the time interval between the time the input arrives to the system and the time when its output is available. In other words, latency is nothing more than a measure of the speed of response of a system.

**LCA (Life Cycle Analysis).** Analysis methodology for the evaluation and quantification of environmental impacts associated with a product, process or activity along the entire life cycle from the extraction and acquisition of raw materials to the end of its life.

**Local Loop.** Twisted pair of copper wires through which the telephone connection reaches users; it is the foundation of traditional telephone lines and it is often called the last mile .

**LLU (Local Loop Unbundling).** Service by which alternative operators other than TIM can lease the local loop, i.e., the wire connection between the TIM local exchange and the customer s premises.

**LRIC (Long run incremental cost).** Long run incremental cost is the cost of producing a specific additional increment of a given service in the long run (the period over which all costs are variable) assuming at least one other increment is produced. It includes all the directly assignable variable economic costs of a specific increment of service, which is usually less than the whole service.

**LTE (Long Term Evolution).** Represents the fourth generation (4G) of mobile phone systems. LTE belongs to the 3GPP (Third Generation Partnership Project) standard and is the latest evolution of the GSM / UMTS / HSPA standards. LTE offers a higher spectral efficiency in bits per Hertz and download bandwidth up to 150 Mbit/s per cell reducing the latency time. LTE enables services that require high interactivity (e.g., gaming, video conferencing). A further development of LTE, called LTE Advanced , is being implemented and will allow reaching even higher bitrates in download.

**Machine Learning.** The ability of computers to learn without having been explicitly and preventively programmed.

**MEMS (Micro-Electro-Mechanical Systems).** MEMS are miniaturized devices ranging in size from a few micrometers to a few millimeters, which execute one or more monitoring, processing or actuation functions by deploying a combination of electronic, mechanical, optical, chemical or biological components integrated on a usually silicon hybrid circuit.

**MGCP (Media Gateway Control Protocol).** An Internet Engineering Task Force (IETF) signaling protocol allowing a bridge between classic telephone networks and Internet (i.e., IP-based) infrastructures.

**MGW (Media GateWay).** Equipment that processes voice and video traffic adapting codings between different technologies (e.g., from circuit to packet).

**Microservices.** A specific architectural model for the development of a single application as a suite of small services. Each micro-service is identified as a specialized processing process (e.g., a web server or a storage application) and is able to communicate with fast and lean mechanisms, often based on API interfaces for the description of HTTP resources. These services provide capabilities for the development of a company s business and are particularly suitable for the creation of software products according to agile methodologies. Each micro-service can be implemented and managed independently using fully automated implementation algorithms, thus ensuring maximum flexibility in the development and maintenance of applications.

**MIMO (Multiple Input Multiple Output).** A set of techniques aimed to increase the overall bitrate of radio access through simultaneous transmission of two (or more) different data signals on two (or more) colocated antennas, using the same frequency resources. The receiving side, also equipped with two or more antennas, is able to discriminate the different data signals by exploiting the differences in time and direction of arrival of the simultaneous signals that are caused by multipath propagation. Multipath propagation (i.e., the fact that a signal from A reaches a point B via multiple paths due to reflection and scattering from objects (such as buildings, trees)) is a natural phenomenon affecting radio communications, which used to be seen as an impairment. Conversely, MIMO techniques exploit (using suitable signal coding) this multiplicity of paths to increase capacity.

**Mobile UBB.** Mobile ultrabroadband refers to the use of HSPA mobile network (evolution of the 3G network), LTE and its evolution to provide ultrabroadband connectivity.

**MPLS (Multi Protocol Label Switching).** See IP/MPLS.

**MSC (Mobile Switching Center).** Executes functions such as controlling calls, switching traffic, billing, controlling and authentication and acts as an interface with other networks.

**Multicast ABR (Multicast Adaptive Bit Rate).** Technology that encodes the video multicast traffic in different streams at different bitrates, used according to the channel conditions, allowing to optimize the use experience the use of network resources.

**Multimedia.** A service involving two or more communications media (e.g., voice, video, text, etc.) and hybrid products created through their interaction.

**MVNO. (Mobile Virtual Network Operator).** MVNO is a mobile communications service provider that does not own the radio spectrum or wireless network infrastructure over which the MVNO provides services to its customers.

**NaaS (Network as a Service).** The term NaaS (Network as a Service) refers to the provision of virtual network services by a Network Provider to a third party, such as a Service Provider not equipped with geographically networked resources, or a medium/large customer that requires basic or advanced connectivity resources on a public or shared network infrastructure. Some examples of services that refer to the NaaS model are Virtual Private Networks (VPNs), Dynamic Bandwidth Services (Bandwidth on Demand) and Mobile Network Virtualization. Today, the spread of NaaS offers is increasingly supported by flexible network virtualization models and the use of network programming and automation technologies, such as Software Defined Networking (SDN).

**Naked.** A digital subscriber line without an analog or ISDN telephony service. It is a line dedicated to data services.

**NB IoT (NarrowBand Internet of Things).** A 3GPP specification enabling the Internet of Things, based on the optimization of narrowband radio access aimed at the application of LTE technology to sensor networks. Its characteristics include few and small messages per day, high coverage range (e.g., to reach the counters in the basements), very high battery life (target 10 years), high number of connections per cell (tens of thousands) and very low cost of the modules.

**Net Neutrality.** The principle that Internet service providers should treat all data equally and not discriminate or charge differently based on user, content, website, platform, application, type of equipment or method of communication.

**Network.** An interconnected system of elements. In a telephone network, these consist of switches connected to each other and to customer equipment. The transmission equipment may be based on fiber optic or metallic cables or radio connections.

**Network cap.** See Price cap.

**NFV (Network Function Virtualization).** The NFV paradigm allows both fixed and mobile network functions to become software applications, called VNF (Virtual Network Function), which the operator can instantiate on commercial servers, exploiting virtualization technologies, separating the link between hardware and software present in the current network devices.

**NGAN (New Generation Access Network).** It can be realized with different technological solutions, typically fiber optic and VDSL pairs.

**NGCN (Next Generation Core Network).** TIM s own name for the IP backbone.

**NGDC (Next Generation Data Center).** A major rethink of the IT and Data Center architecture through the physical concentration and virtualization of servers to reduce the costs of maintenance/management and energy consumption, and to improve efficiency.

**NGN (Next Generation Network).** New generation network created by TIM to meet the demands of corporations, public administrations and citizens. The new network architecture guarantees an infrastructure designed to cover multiple offers by increasing customization levels and bandwidth availability, removing bandwidth limits and providing a huge capacity along with a wide selection of access systems.

**NGNs (Non-Geographic Numbers).** Non-geographic numbers are unique as they are by definition not associated with any particular geographic location (*e.g.,* premium rate services, toll free, directory assistance services).

**Node.** Topological network junction, commonly a switching center or station.

**Node B (similar to BTS in GSM).** This is the Radio Base Station in UMTS technology which, via an antenna, sends the UMTS radio signal that creates cell coverage (typically 3 cells for Node B). It also performs functions that are strictly linked to managing the radio connection.

**N-play offering.** Offerings to customers which bundle two or more of the following mobile and fixed services: voice, broadband and ultrabroadband data, video and TV, mobile.

**NYSE.** The New York Stock Exchange.

**OAO (Other Authorised Operator).** Operators other than the incumbent one that provide services to their customers by using the fixed access network of the incumbent.

**OHSAS (Occupational Health and Safety Assessment Series).** An international standard that sets the requirements that a management body for the protection of workers health and safety must meet.

**OLOs (Other Licensed Operators).** Companies other than the incumbent operator that operate telecommunications systems in a national market.

**OLT (Optical Line Termination).** Optical element of the PON network (Passive Optical Network) that acts as an interface between the PON itself and the Backbone network. OLT is located in the central office.

**ONU (Optical Network Unit).** Optical element of the PON network (Passive Optical Network) which acts as an interface with the user access device or the distribution network to users. ONU is located in the distribution cabinet.

**Open Source.** A computer software in which source code is released under a license in which the copyright holder grants users the rights to study, change and distribute the software to anyone and for any purpose. Open-source software may be developed in a collaborative public manner.

**Optical fiber.** Thin glass, silica or plastic wires, building the base infrastructure for data transmission. An optical fiber cable contains several individual fibers, and each of them is capable of delivering a signal (light impulse) at almost unlimited bandwidth. Optical fibers are usually employed for long-distance communication: they can transfer heavy data loads protected from possible disturbances along the way. The driving capacity of optical fibers is higher than the traditional cable and copper twisted-pair lines.

**OSS (Operations Support System).** Methods and procedures (whether automatized or not) that directly support the daily operation of the telecommunications infrastructure.

**OTN (Optical Transport Network).** A technology designed to enable multiplexing of digital signals for transport over WDM links, and to achieve OAM capabilities for these signals similar to those available in SDH.

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This allows a better utilization of WDM links, since it allows to fill lambdas with high rate signals (e.g., 100 Gb/s), which may contain several lower rate signals (e.g., 10 Gb/s), rather than devoting a lambda for each lower rate signal.

**OTT (Over the Top) players.** Operators offering contents and services on the Internet without owning the proprietary TLC network infrastructure.

**Outsourcing.** Entrusting an external party carrying out services and business operations. For example, it can be outsourced the planning, construction and hosting services of a telecommunications management system and, ultimately, the management of the entire telecommunications system.

**PaaS (Platform as a Service).** One of the three Cloud offer service models. Through a PaaS offer of a Cloud Provider, the consumer is given the opportunity to distribute applications created on their own, or acquired by third parties, on the Cloud infrastructure, using programming languages, libraries, services and tools supported by the supplier. The consumer does not manage or control the underlying Cloud infrastructure, including network, servers, operating systems, memory, but has control over the applications and possibly the configurations of the environment that hosts them.

**Packet-Switched Services.** Telecommunications services provided by telcos and long distance carriers that route packets of data between local area networks (LANs) in different geographical locations to form a wide area network (WAN). Packet-switching services are used to connect multiple LANs into a point-to-multipoint configuration, usually called a multipoint WAN.

**Pay-Per-View or PPV.** A system by which the viewer pays to see a single program (such as a sporting event, film or concert) at the moment at which it is transmitted or broadcast.

**Pay TV.** Subscription TV channels. To receive Pay TV or Pay-Per-View programs, a decoder must be connected to the television set, and a conditional access system is needed.

**PCS (Personal Communications Services).** Set of wireless communications functionalities, voice and/or data, which provide similar services such as mobile ones.

**Peering.** The voluntary interconnection of Internet networks, that refer to different Internet Service Providers which allows users to exchange traffic between different networks.

**Penetration (market penetration).** It represents the number of people (or subscriber) who acquires goods/ services of a particular brand or a particular category, divided by the population where the service is available.

**Platform.** It s an execution environment that includes hardware, software, application servers and other supporting tools, for the execution of programs.

**POP (Point Of Presence).** It is a point of access to the network (router), provided by an Internet Service Provider (ISP), able to route traffic to end users connected to POP.

**POTS (Plain Old Telephone Service).** Refers to the basic telephony service (single-line telephones, fixed-line services and access to public voice telephony network).

**Price-cap.** Then it identifies the maximum price limit, set by a regulator, at which a product/service can be sold.

**PSTN (Public Switched Telephone Network).** It is the first-generation telephone network and provides basic telephone service.

**PTN (Packet Transport Network).** A class of equipment that implements natively both SDH and Ethernet technologies, (i.e., it is able to transport and switch separately both kinds of traffic). It is used to connect smaller, peripheral central offices to larger ones, that is a use case where aside packet traffic (e.g., backhauling of broadband access and mobile sites) also legacy circuit traffic (e.g., voice, 2G backhauling) may be found.

**RAN (Radio Access Network).** The part of mobile network that implements radio technologies, comprised of data transport functions over air interface and control functions.

**Refarming.** Reassignment of frequency band of an operator of mobile networks from one technology to another for optimization reasons (e.g., UMTS900 instead of GSM900 or LTE1800 instead of GSM1800).

**RNC (Radio Network Controller counterpart of BSC in GSM).** It is the equipment (or node) for the control and aggregation of 3G network.

**Roaming.** Agreement among two or more Mobile Operators from different Countries, under which Users can use the mobile network of other Operators participating in the agreement. The roaming service is activated for example when the terminal is used overseas and enables a mobile user to access a different network from the one to which he subscribes.

**RoHS (Restriction of Hazardous Substances).** European Directive No. 95/2002 that regulates the use of hazardous substances in electrical and electronic equipment, in order to contribute to the protection of human health and environment.

**RTG.** Also known as the Public Switched Telephone Network, is the first-generation telephone network and provides basic telephone service.

**SaaS (Software as a Service).** As part of the Cloud offer service models (see also Cloud entry), the SaaS model allows the consumer to use a supplier s applications and services, operating on a cloud infrastructure. The applications are accessible from different devices through a light interface (e.g., a thin client), such as an email application on a browser, or from programs with a specific interface. The consumer does not manage or control the underlying cloud infrastructure, including network, servers, operating systems, memory, and even the capabilities of individual applications, except for limited configurations intended for him.

**SAR (Specific Absorption Rate).** SAR is a measure of the percentage of electromagnetic energy absorbed by the human body when it is exposed to the action of an electromagnetic field at radio frequency (RF). See also EMF limits.

**SDH Standard (Synchronous Digital Hierarchy).** The European standard for high-speed digital transmission. It s a protocol of the physical layer used for multiplexing in time division and the subsequent digital transmission of telephony and data, in geographic networks on optical fiber, electric cable or radio link.

**SDN (Software Defined Networking).** A paradigm based on network virtualization that aim is to transform traditional networks into flexible and intelligent platforms to satisfy in real time the bandwidth requirements and the dynamic nature of digital applications.

**SD WAN (Software Defined WAN).** The SD-WAN solutions are an innovation of the traditional Wide Area Network solutions and of the Edges IP Networking, developed to offer advanced connectivity services addressed to business customers. SD-WAN solutions work agnostically with respect to the access technology, and the WAN transport network, they use dynamic routing of data on an application basis and in strong integration with multi-cloud solutions to link connectivity to certain added-value services such as WAN optimization, application monitoring and advanced security.

**Service Exposure.** The Service Exposure is an infrastructure that offers certain functionality, called Application Programming Interface (API), both to Third Parties (eg Business Partner), both for internal use.

**Service Orchestration.** Service Orchestration means a single centralized business process that can be performed by an orchestrator (e.g., a SW platform) that coordinates the interaction between various services and is responsible for their invocation and composition, as well as the management of transactions between the individual services. Service Orchestration is often compared to service choreography, which instead makes a decentralized approach to the composition of services, where each of the services participating in the choreography implements a self-consistent process / workflow.

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**Service Provider.** The Service Provider offers to the Users (Residential or Business) that subscribe his offer, a range of contents and services.

**SGT (Transit exchange interconnection level for telephone traffic).** Transit Exchange for telephone traffic carriage, routing and transmission.

**SGU (Local exchange interconnection level for telephone traffic).** Local Exchange for telephone traffic carriage, routing and transmission. See also Central Office.

**SL (Distribution Frame level for telephone traffic).** See Central Office.

**Shared Access.** Shared access to the user s twisted pair with another TLC service provider by using separately voice and non-voice band frequency spectrum. This mode allows keeping voice telephony with an Operator (TIM or others) and ADSL service on the proprietary network of the shared access operator, i.e., not passing over the TIM network but directly through the DSLAM of the operator.

**SLA.** Service Level Agreements (SLA) are contractual instruments through which service metrics are defined (eg quality of service) that must be respected by a service provider (provider) towards their customers / users.

**SLU (Sub Loop Unbundling).** It consists in providing access to the local sub-section of the Operator copper network, in particular the section of the network between the user site and the distribution cabinet or an intermediate concentration point.

**Small Cells.** Small cells are low energy consumption access nodes to the radio spectrum. Smaller than the antennas, Small Cells are usually used in mobile telephony, both for the coverage of outdoor areas (squares, pedestrian streets, etc.) and for the coverage of indoor hot spots (airports, stadiums, shopping centers, stations, hospitals, university campuses, etc.).

**SMART CITY.** The term Smart City refers to an urban area that uses integrated ICT technologies to optimize resources in key areas: mobility, communication, economy, work, environment, administration and construction. From an infrastructural point of view, the use of available resources on the web improves economic and political efficiency and can allow social, cultural and urban development.

**Smartphone.** Electronic device that combines the functions of a mobile phone and a handheld computer equipped with a complete operating system.

**SMART TV.** The term Smart TV identifies the new generation of televisions which allows us to enjoy multimedia audio-video content (e.g., movies, TV series, music videos, gaming) through an internet connection.

**SME.** The small- and medium-size enterprise market (from 3 to 50 employees).

**SMS (Short Message Service).** Short text messages that can be received and sent through GSM-network connected cellular phones. The maximum text length is 160 alpha-numerical characters.

**SOHO.** The small office/home office market which consists of businesses that use telephone lines to connect to the Internet, as opposed to dedicated lines, and is made up of small businesses, generally with one or two employees, and businesses conducted out of the home.

**SON (Self-Organizing Network).** It is a set of technologies and architectures that allows operators to introduce, in the context of radio-mobile networks, the technological enablers for the automation of network configuration, optimization and assurance processes.

**STB (Set-Top Box).** A customer device able to receive TV signals from a communication network (such as broadband/ultrabroadband access network, terrestrial broadcast, satellite broadcast, etc.) and output them to TVs and other display devices (monitors, projectors, etc). It may include Conditional Access functions to handle paid content.

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**Tablet.** A portable computer with compact dimensions whose screen can be used to write or give commands with the touch of a finger or using a specially designed stylus.

**Switch Telephone Switch.** Synonymous of Telephone Exchange, i.e., network equipment used to set up and route telephone calls to the number called possibly through other switches. They may also record information for billing and control purposes.

**Switch Network Switch.** Data networking equipment able to receive and forward packets using information at layer 2 of OSI (Open Systems Interconnection) model (i.e., hardware addresses of other equipment).

**Synchronous.** Type of data transmission in which there is permanent synchronization between the transmitter and receiver.

**Tablet.** Portable computer with compact dimensions whose screen can be used to write or give commands with the touch of your fingers or using a specially designed stylus.

**TCO (Total Cost of Ownership).** The TCO represents the global cost of an asset (e.g., an IT equipment) during its life cycle. The TCO takes into account both direct costs (hardware costs, network infrastructure, licenses) and indirect costs (management, maintenance, energy consumption).

**TDMA (Time Division Multiple Access).** A technology for digital transmission of radio signals between, for example, a mobile phone and a radio base station. TDMA breaks signals into sequential pieces of defined length, places each piece into an information channel at specific intervals and then reconstructs the pieces at the end of the channel.

**ToIP (Telephony over IP).** The term is often used as synonymous of VoIP, however it has a wider meaning since it includes advanced telephony services (such as video, messaging, possibly some call handling, etc.) beyond the basic voice communication.

**TRX.** Radio transceivers located in BTS.
**ULL (Unbundling of the Local Loop).** See LLU.

**Ultrabroadband**. Includes all network technologies that offer connectivity from 30Mbit/s to over 1Gbit/s, referring in particular to the peak rate and not to the average available. The definition is related to the characteristics of the fixed and mobile access network. By increasing the capacity and the speed, Ultrabroadband technologies allow quicker access from multiple users to the content available on the net, also on the move, and to take advantage of high quality video up to Ultra HD and interactive gaming.

**UMTS (Universal Mobile Telecommunications System).** Third-generation mobile communication standard. It consists of a broadband system in which data travels at a bandwidth of 2Mb/s, communication is faster, quality is better and multimedia contents can travel over the Net.

**UMTS Cell.** Geographical portion of territory illuminated by a Node B.

**UMTS Channels**. These enable all the customers of the cell to access both the CS (Circuit Switched) services and PS (Packet Switched) services of UMTS technology.

**Unbundling.** The service offered by the incumbent to the alternative operator which consists of the rental of the local loop i.e., the wire connection between the local exchange and the customer s premises, so that the alternative operator is able to connect the twisted pair from the customer to its own equipment

**Universal Service.** The obligation to supply basic service at an affordable price, or at special rates solely for subsidized users.

UPS (Uninterruptible Power Supply). Electrical equipment that provides continuous powering to users in case of power outage.

**VAS (Value Added Services).** Value Added Services provide a higher level of functionality than the basic transmission services offered by a telecommunications network. In PSTN and first generation mobile networks the basic service was telephony (switched voice calls, initially analog and later digital ones) while VAS could include data and fax transmission services, as well as call handling features such as call waiting, call forwarding, etc.. As time passed VAS based on call handling grew with further features such as toll free calling, voice virtual private networks, etc. A new class of VAS also developed in mobile networks, including message handling services such as SMS and MMS. In parallel, development of data networks turned data transmission services (initially X25, then Frame Relay, ATM, Ethernet, IP) into basic services of those networks, on top of which there may be VAS such as address translation, data virtual lines and virtual networks, traffic priority, encryption, etc.. A further category of VAS is those based on contents of Service Providers linked to the network, beginning with contents provided on telephony network, going on with contents delivered via SMS (news, weather, etc) and contents provided via browsing from mobile and fixed terminals, and arriving to video streaming contents.

**VDSL (Very-high-data-rate Digital Subscriber Line).** Access technology that allows providers to give clients, by means of an apparatus installed in their homes, access to voice and TV services on the traditional telephone line with speeds of up to 50 Mbps in downstream.

**VDSL2 (Very-high-data-rate Digital Subscriber Line 2).** 2nd generation VDSL, able to achieve downstream speed in the range of hundreds of Mbps. Actual data rate however is largely dependent upon the distance between customer equipment and network equipment, e.g., for distances of some hundred meters the achievable rate is about 100 Mbps. For this reason network equipment is typically located in street cabinets, so to be closer to customers. A VDSL2 evolution named eVDSL (enhanced VDSL) yields achievable rates around 200 Mbps; it has been recently deployed in TIM network.

**Vectoring.** Transmission technology that removes mutual interference (crosstalk) between copper lines bundled in the same cable. Of particular interest is the use on VDSL / VDSL2 / eVDSL lines in view of the growing penetration of ultrabroadband services, which would make interference more perceptible. In this perspective, the use of vectoring allows to maintain the typical performances of the aforementioned technologies. The technology is placed in the ONU apparatus where to be effective it is applied on all the lines of a cable; this means that in case of SLU (Sub Loop Unbundling), that is the presence of ONUs of several operators serving the lines of the same cable, a more complex implementation is required, the MOV (Multi-Operator Vectoring) that coordinates the vectoring of the different ONUs.

**Virtualization.** An approach to implementation of functionality resorting only to software running on general purpose hardware generally not dedicated, as opposed to approaches resorting also to special purpose and/or dedicated hardware

**VOD (Video On Demand).** TV-program offering on user s request, with payment of a fee for each purchased program (a movie, a soccer match, etc.). Broadcast specifically for cable and satellite TV.

**VoIP (Voice Over IP).** A technology that allows transmission of voice communication over an Internet connection or another dedicated network using the Internet Protocol (IP) data networks (such as IP-based LANs, intranets or the Internet) instead of a conventional phone line.

**VoLTE/ViLTE (Voice over LTE / Video over LTE).** A service providing voice and video calls over IP via LTE radio access, controlled by standard ToIP architecture named IMS (IP Multimedia Subsystem). The mated naming VoLTE/ViLTE is used since the service is essentially the same for voice and video, differing only in the type of media streams that are set up. Since it is standard based, it achieves interoperability among user terminals and between terminals and networks.

**VPN (Virtual Private Network).** A network designed for a business customer or government agency, using the infrastructures of a carrier and providing customized services, and which operates in such a manner as to appear dedicated to the user thereof.

**VRAN (Virtual Radio Access Network).** An architecture applied in 4G/5G networks which implies a split of the Base Station between a Centralized Unit and a remote or distributed unit. The CU is typically placed in a more centralized site than antennas and deals with baseband signal processing, so also the terminology BBU (BaseBand Unit) is used, while the Remote Unit is left at antenna sites to provide radio coverage and is also termed RRU (Remote Radio Unit). Given this split the CUs may be implemented as Virtual Network Functions on a suitable hardware infrastructure, from which the virtual title.

For the viability of the architecture a key issue is the choice of the partition of Base Station functions between CUs and DUs, which affects the requirements on communication links CU-DU (referred to as fronthaul). In the 5G development efforts this issue has been addressed by identifying split options that are candidate for standardization.

**VULA (Virtual Unbundling Local Access).** A wholesale service provided by incumbent providers to alternative operators, where the incumbent provides over its broadband access network the transport of data traffic (a bitstream ) between the end customer and an interconnection point where the alternative operator receives said traffic. In TIM s case, the interconnection point is located at local exchange level, aside the OLT (Optical Line Termination) i.e., the head end of optical access network.

**WAN (Wide Area Network).** A private network that covers a wide geographic area using public telecommunications services.

**WEEE (Waste Electrical and Electronic Equipment).** Waste from electrical and electronic equipment which the holder intends to dispose of as it is faulty, unused or obsolete.

**White, gray and black areas.** The distinction between white, gray and black areas is relevant for the assessment of state aid to support the development of ultrabroadband networks, in terms of the compatibility of the aid with respect to Community legislation. This classification is contained in the European Union Guidelines:

- white areas are areas without ultrabroadband (UBB) networks (connectivity), where private investors do not intend to invest in the next three years;

- gray areas are areas in which an ultrabroadband (UBB) network (connectivity) is present or will be developed in the next three years by a single private operator.

- black areas are areas in which at least two ultrabroadband (UBB) networks (connectivity) of different operators are present or will be developed over the next three years.

**WI-FI.** Wireless technology enabling data links in a limited area, generally in some hundred meters range, with speed up to tens of Mbps. Typical applications are in homes and offices as alternative to wired LAN, as well as in public services for Internet access, and also to create link between devices (e.g., between a laptop and a smartphone linked to Internet).

**Wi Max (Worldwide Interoperability for Microwave Access).** A technology that allows wireless access to broadband telecommunications networks, initially defined in order to work on ranges up to tens of kilometers and speed in the tens of Mbps. It was defined by the Wi MAX Forum, a global consortium formed in 2001 that brings together major companies in the field of fixed and mobile telecommunications and whose purpose is to develop, test and promote the interoperability of systems based on IEEE standards.

**WLL (Wireless Local Loop).** The means of providing a local loop equivalent (e.g., connection from customer premises to local exchange) without the use of wiring, resorting instead to wireless technologies.

**WLR (Wholesale Line Rental).** It is a telephony only wholesale service provided by the Incumbent to alternative operators, whereby the alternative operator gets an ULL-like service without the need to physically deploy equipment at local exchange sites. It is technically similar to Carrier PreSelection (CPS), and differs from CPS on the commercial side since the end customer is not subscribed to the incumbent s access service, nor billed for it; in this way alternative operators are able to provide to customers both access and traffic services and to produce a single bill covering both services.

**xDSL (Digital Subscriber Line).** It is a technology that makes use of standard telephone lines and it includes different categories including: Asymmetric DSL (ADSL), High-data-rate DSL (HDSL), Very high bit rate DSL (VDSL) and enhanced Very high bit rate DSL (eVDSL). This technology uses a digital signal at very high frequencies in order to achieve high data transfer rates.

## 4.6 DESCRIPTION OF PROPERTY, PLANT AND EQUIPMENT

### General

As of December 31, 2018 and 2017, property, plant and equipment owned and leased are detailed as follows:

| | As of December 31, 2018 | | | | As of December 31, 2017 | | | |
|---|---|---|---|---|---|---|---|---|
| | Owned | Leased | Total property, plant and equipment | % of total property, plant and equipment | Owned | Leased | Total property, plant and equipment | % of total property, plant and equipment |
| | (millions of euros, except percentage) | | | | | | | |
| Land | 250 | 16 | 266 | 1.6 | 213 | 16 | 229 | 1.4 |
| Civil and industrial buildings | 588 | 1,365 | 1,953 | 12.1 | 488 | 1,768 | 2,256 | 13.6 |
| Plant and equipment | 12,096 | 302 | 12,398 | 76.9 | 12,049 | 353 | 12,402 | 75.0 |
| Manufacturing and distribution equipment | 31 | | 31 | 0.2 | 36 | | 36 | 0.2 |
| Other | 358 | 148 | 506 | 3.1 | 376 | 138 | 514 | 3.1 |
| Construction in progress and advance payments | 928 | 64 | 992 | 6.1 | 1,054 | 56 | 1,110 | 6.7 |
| **Total** | **14,251** | **1,895** | **16,146** | **100.0** | **14,216** | **2,331** | **16,547** | **100.0** |

Land comprises both built-up land and available land.

Buildings (civil and industrial) almost exclusively include buildings for industrial use hosting telephone exchanges or for office use, and light constructions.

Plant and equipment includes the aggregate of all the structures used for the functioning of voice and data telephone services.

Manufacturing and distribution equipment consists of instruments and equipment used for the operations and maintenance of plants and equipment.

Other mainly consists of hardware for the functioning of the Data Center and for work stations, furniture and fixtures and, to a minimal extent, transport vehicles and office machines.

There are no encumbrances that may affect our utilization of our property or equipment.

**REAL ESTATE (LAND, CIVIL AND INDUSTRIAL BUILDINGS)**

As of December 31, 2018, the Company owned a number of buildings throughout Italy. Specialized buildings for telecommunications services account for the majority of properties both in number and in terms of book value. Such buildings house mainly exchange equipment and transmission equipment, and are used as part of our continuing telecommunications operations. General purpose properties consist chiefly of offices, depots and computer centers.

At the end of 2014, TIM launched a major real estate project, aimed at restructuring the use of space for industrial usage in a manner consistent with the evolution of next-generation networks and optimizing the number of properties used as offices through the creation of functional centers that adopt a modern and more efficient space utilization.

This real estate project provides for a path of restructuring, termination and renegotiation of contracts, to achieve efficiency and savings, mainly through the extension of terms and lower rents.

Properties of strategic importance have been identified, in relation to their current use and to significant investments in technology and real estate planned to support the technological evolution of the network and new ICT services.

In particular, in 2015, the Company purchased five strategic buildings and two strategic buildings were acquired in 2016. Over the 2015-2016 period the Company renegotiated and/or renewed approximately 1,100 leases. Over half of the renegotiated property rental contracts were previously accounted for using the operating lease method, however, as a result of the changes to the relevant contracts, they have been recognized in the statement of financial position at December 31, 2016 using the financial method (Tangible assets held under finance leases). In 2017, the renegotiation process continued and approximately 150 further contracts were successfully renegotiated.

In 2018, the Company purchased an additional 12 strategic buildings and returned 18 large properties mostly per office to the property, resulting in significant economic savings.

In 2019, we plan to proceed as the previous years in the real estate project, with the aim of further reducing real estate costs.

## NETWORK INFRASTRUCTURE (PLANT AND EQUIPMENT)

The TIM Group network infrastructure includes the domestic (Italian) and international fixed network, the domestic mobile network and the Brazilian mobile network. See -4.5 Glossary of Selected Telecommunications Terms , for definitions of the technical terms used in this section.

### *Domestic (Italian) Fixed Network*

At December 31, 2018, the domestic fixed network had the following figures:

| | |
|---|---|
| Central Offices | approximately 10,360 |
| Switching areas | 527 |
| Gateway areas (TDM) | 33 |
| Aggregation areas | 12 |
| Copper network | 114.4 million kilometers-pair[4] |
| Fiber optic access/carrier network | 16.4 million kilometers-fiber |
| Long Distance VC4 | 4,256 |
| Long Distance Lambda (l) | 991 l at 1 Gbps, 50 l at 2.5 Gbps, 1,291 l at 10 Gbps and 135 l at 100 Gbps |
| Broadband/ADSL network | Approximately 9,700 Central Offices |
| Main PoP data networks | 32 |

**Fixed Voice network.** The Fixed Voice Network dedicated to serving traditional voice (**TDM**) consists of 567 main local switches (**SGU**). Concerning the OLO interconnection, local switches are divided in 33 gateway areas.

Each local switch is physically interconnected to 2 out of 24 (12 pairs) Backbone Nodes ( **BBN** ).

Voice over IP (VoIP) service is guaranteed by a specific control platform dedicated to consumer and business customers. The IP/TDM interworking is carried out in the transit layer.

In terms of cable infrastructures, the fixed network includes 114.4 million km of copper pairs, mainly in the distribution network, and also 16.4 million km of fiber, both in access and trunk network.

Optical fiber cables significantly increase network capacity and make it possible to offer hi-tech services based on the simultaneous transmission of various types of signal, such as voice, data and video.

**Domestic Transport Network.** The transport network uses the **SDH** (Synchronous Digital Hierarchy) or **PTN** technology and the optical **DWDM** technology (Dense Wavelength Division Multiplexing) and is based on optical fibers with systems from 155 Mbps to 100 Gbps. WDM systems realize point-to-point connections multiplying by a factor from 12 to 96 the bandwidth capacity of each optical fiber, thereby increasing the total capacity of the transport network.

The fixed long-distance transport network routes 4,256 VC-4 on the SDH Arianna, Phoenix, Phoebe, Kosmos networks. It supports also 991 l at 1 Gbps, 50 l at 2.5 Gbps, 1,291 l at 10 Gbps and 135 l at 100 Gbps on the DWDM systems and on the **Kaleidon** network.

[4] in 2016 TIM adopted a new copper twisted pair counting system which influenced the measures in some CO Areas.

**Item 4. Information On The TIM Group** **Description Of Property, Plant And Equipment**

Kaleidon is the national optical transport platform that allow to set up a completely photonic optical mesh network. Kaleidon along with its expansion (Kaleidon Evolution) supports optical channels at 40 Gbps and 100 Gbps with protection and restoration mechanisms at photonic level.

**OPB (Optical Packet Backbone).** The OPB is the IP backbone of TIM based on 32 POPs equipped with Terarouters.

The OPB network supports:

· Internet traffic of residential, business and Wholesale customers;

· VPN traffic (Virtual Private Network) of business customers;

· Voice traffic;

· Video traffic;

· Mobile data traffic.

At the end of 2018 in the 8 major POPs a new IP backbone (Next Generation Core Network) has been deployed, featuring a larger capacity than OPB.

**OPM (Optical Packet Metro)**. The OPM network is the Metro-Ethernet network at regional level for traffic aggregation and transport up to the 32 IP POPs. The OPM network consists of 30 metro regional networks and support traffic from mobile and fixed access nodes. The OPM provides also Gigabit Ethernet Services for business customers (Ethernity, Hyperway, Gigabusiness and GEA on GBE optical access).

**Broadband/xDSL network.** The broadband access network of TIM offers hi-tech telecommunications and multimedia applications and is based on ADSL2 DSLAM technology.

In 2018, the xDSL services for residential and business customers (retail and wholesale) covers more than 99.4% of the population and have been extended to 7,673 towns**,** including S. Marino (town covered minimum at 70%).

At the end of 2018, approximately 9,700 local switching areas were covered by ADSL technology.

**NGAN (Next Generation Access Network). NGAN (Next Generation Access Network).** In 2018 TIM continued to deploy a **NGAN** , based on optical fiber cables. NGAN deployment started in 2009 in Milan based on Fiber-To-The-Home ( **FTTH** ) architecture. Since 2012, deployment has been extended to the main cities in Italy with Fiber-To-The-Cabinet ( **FTTCab** ) architecture using fiber to street cabinets equipped with VDSL2 cards. In 2016, TIM also introduced eVDSL cards to increase the UBB speed to 200 Mbps.

The NGAN coverage in FTTCab is approximately 80% of reached households at the end of 2018 (approximately 19,400,000 households, through approximately 5,100 distribution central offices).

Approximately 113,500 cabinets NGAN are reached with fiber optic cables and for approximately 103,100 of these cabinets the UBB services are available for customers; approximately 1.400 ONU-cab are installed in Central Office (FTTE architecture) to provide UBB services to customers with copper accesses without cabinet.

With the aim of improving ultrabroadband service to 1 Gbps in 2015, TIM began to bring FTTH to the 30 main cities, their neighboring cities, and a further 59 BUL[5] cities in south of Italy. The total of cities reached by 1Gbps services at the end of 2018 is 118.

The households in FTTH are nearly 3,500,000, with a coverage of about 14,2% at the end of 2018

***<u>Domestic (Italian) Mobile Network</u>***

The domestic mobile network consists of:

- GSM network (2G: second generation network);

[5] BUL is an Italian acronym (Banda UltraLarga) referring to a public funding project aimed to deploy ultrabroadband infrastructures in 7 regions in South of Italy.

- UMTS network (3G: third generation network); and
- LTE network (4G: fourth generation network).

On December 31, 2018, TIM domestic mobile network had the following figures:

**GSM/EDGE network**

- 14,286 BTS (Base Transceiver Station) GSM radio station (14,352 BTS at the end of 2017): -0.5%; approximately 900 of them are µBTS;
- 435,141 radio channels (437,216 at the end of 2017): -0.5%
- 94 BSC (Base Station Controller);
- GSM Core Network: since the Circuit Switched Core Network is common to GSM and UMTS (Dual Access architecture), its description is given below.

**UMTS/HSPA network**

- 21,118 node B UMTS radio base station (20,728 node B at the end of 2017): +1.9%;
- 3,090,355 radio channels (3,057,396 radio channels at the end of 2017): + 1.1%;
- 118 RNC (Radio Network Controller);
- GSM/UMTS Core Network: 50 MSC-server (Mobile Switching Center/Gateway), 88 access MGW (Media Gateway), 17 transit MGW, 4 IP STP (Signalling Transfer Point), 8 TSC-server (Transit Switching Center), 42 HLR (Home Location Register), 4 GGSN (Gateway GPRS Support Node).

In 2018, the HSDPA at 42 Mbps coverage level reached about 89% of the population. Given the wider coverage reached by LTE and the focus on 5G implementation, further HSPA development might receive a lower priority.

**LTE network**

TIM acquired frequency blocks on 800 MHz, 1800 MHz and 2600 MHz through an auction in September 2011.

The three bands are used for LTE deployment to provide ultrabroadband services to mobile customers. Moreover, in September 2015, TIM acquired a frequency block in the 1500 MHz band, specifically devoted to mobile ultrabroadband. In 2016, TIM initiated deployment of this new layer.

In September 2018, TIM acquired frequency blocks in the bands 700 MHz (available from July 2022), 3600 MHz, 26.5 GHz (both the latter available from January 2019) for 5G deployment.

At the end of 2018, LTE network coverage is more than 98% of the national population.

· 23,683 enode B (19,358 at the end of 2017) +22.3%; approximately 950 of them are micro with remote radio unit;

· LTE core network is undergoing a technological upgrade and currently includes: 18 (17 physical nodes + 1 virtual node) SPGW (Packet Data Network/Serving Gateway), 12 MME[6] (Mobility Management Entity) all using triple access 2G/3G/4G technology, 12 (6 physical + 6 virtual nodes) HSS (Home Subscriber Server) Front End and 15 CUDB (Centralized User Database) according to Data Layered Architecture, 3 Mobile Broadband Virtual Policy Manager.

As of the end of 2018, the IMS core Network includes 5 (4 physical nodes + 1 virtual node) CSCF (Call session Control Function), 5 (4 physical nodes + 1 virtual node) MTAS (Multimedia Telephony Application Server) and 4 (2 physical + 2 virtual nodes) VoLTE Policy Manager for handling voice services on LTE (VoLTE).

[6] An additional MME is devoted to the GSM-On-Ship service

***International Fixed Network***

TI Sparkle provides connectivity services (voice, mobile data, IP and managed bandwidth) and Cloud and Data Center services (Infrastructure as a Service IaaS, Disaster Recovery, enhanced colocation) to national and international wholesale customers and to multinational corporates (MNCs) relying on an international network made of a proprietary cross-border backbone and bilateral connections.

TI Sparkle international backbone spans 450,000 km, covering all of the major regions worldwide and connects over 500 international voice operators. The cross-border backbone integrates 4 regional networks:

· Pan European backbone ( **PEB** );

· Latin American backbone;

· Mediterranean backbone;

· USA backbone.

In detail:

· **Pan European Backbone.** Proprietary high speed optical network built over a fiber optic backbone spanning the main European countries: Italy, France, United Kingdom, Netherlands, Belgium, Germany, Switzerland, Austria, Spain, Czech Republic, Slovakia and Romania. The overall length is about 45,000 km;

· **Latin American backbone.** High-capacity backbone based on fiber optic ring networks, both terrestrial and submarine, with an overall length of about 36,000 km, including the Miami-New York section. The ring connects the main cities of South and Central America to North America;

· **Mediterranean backbone.** Submarine ring network with a highly reliable configuration complemented by terrestrial fiber extensions from Istanbul and Athens to Sofia. The total length is about 10,000 km and connects the major markets of the Mediterranean and Balkans area: Italy, Greece, Cyprus, Turkey, Israel and Bulgaria;

· **USA backbone.** High-capacity terrestrial backbone with POPs in: Newark, New York, Miami, Jacksonville, Ashburn, Chicago, Palo Alto, Los Angeles and Dallas.

The TI Sparkle network is an integrated, multi-service backbone based on an IP-MPLS core handling differentiated classes of services. The transport layer is based over DWDM, with 10, 40 and 100Gbps optical lambdas while voice services are provided by Class 4 switches. Traffic protection is implemented by MS SPRING, SNCP, OTN, MSP 1+1 and meshed technologies.

In 2018, the introduction of the Huawei 9800 OSN platform (Optical Switching and Networking) for 10/40/100GE has been completed, capacity for back-bone in Italy of 1.2T and in Europe 2.2T have been realized. The range of capacity services in the POPs of Fucino (IT), Secaucus (NJ), Amsterdam (NL) (over multiple sites), New York DRT, Newark (NJ) and Singapore Global Switch has been extended.

With respect to the transport network, in 2018 volumes of about 80T have been made on the 100G ASN OTN network between the main lines in Italy and in Europe. The 100G DWDM network on the Salzburg Vienna route has been extended. The divestment of the PEB DWDM network of 2001 continued.

The construction of the new metro ring in Rome has been completed, connecting the PoP of the Namex with the PoPs of the Sparkle optical backbone of North Rome and South Rome. The new meter ring has a maximum capacity of 96 optical channels at 10G / 100G, has an initial capacity of 2x100G, 4x10G and 4x1G.

The new metro rings have been completed in Amsterdam, Singapore and New York, with the same type of technology as in Rome. In Amsterdam, the metro ring connects the PoPs of DRT, Equinix, InterXion, Globalswitch and Evoswitch. In New York, the metro ring connects the PoPs of Newark, DRT 111-8th Ave and DRT 60 Hudson Street. In Singapore, the metro ring connects the PoPs Tuas, Equinix and Global Switch. Following the installation of the metro rings, efficiency works were carried out with savings in operating costs.

In Milan, the swap of the old Alcatel technology was completed on the north branch of the existing metro ring that links the PoPs of Milan Malpaga and Milano Caldera, introducing the same technology chosen for the other metro rings.

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New Infinera XT3300 devices have been introduced to upgrade the IP backbone in the Balkans, activating a capacity of 600G on the Sofia / 3DC-Istanbul-Athens-Sofia/TLP branch and 1.2T on the Sofia/3DC-Sofia/TLP line.

The upgrade of the Catania-Istanbul link on the Infinera network was completed, with the aim of replacing the old ASN and Huawei technologies with Infinera and making available, in addition to the 36 x10G existing between Istanbul and Catania, even 4x10G and 8x100G on the same route.

The Italian back-bone contracts were renewed, bringing the expiration to 2035.

Completed the upgrades on the ITALIA-MALTA bilateral submarine cables (2x100G); the upgrade # 5 of the Sea-Me-We4 consortium cable was also delivered, equal at 20.2 Mln MIU*km, equivalent to a capacity of 3x100G from Singapore/Tuas to Palermo. The Network Administrator (NA) Sea-Me-We3 has distributed to the Parties the capacity deriving from the upgrade 5.1, to Sparkle have been assigned 1,392,076 MIU* Km. The NA of the SMW4 has released to the Parties the capacity deriving from the second reduction of capacity reserved by agreement in MARA (Mutual Aid Restoration Agreement) between SMW3 and SMW4, Sparkle received 36,558 MIU * km in its Reserve Capacity.

The 2x100G upgrade of the ring between Singapore /Tuas and Singapore /Equinix was completed.

With respect to IP backbone, On the new metro ring in Rome, 2x100G were activated to connect the router to the Namex with the routers of Milan (Caldera and Malpaga).

The new POP was created in the USA in the city McAllen, with the 100G McAllen-Miami and McAllen-Dallas interconnection, reusing the Juniper MX960 router originally purchased for the Vietnam project.

The London Slough POP has been abandoned. Also in London was completed the 1T upgrade of the matrices and the insertion of the 8x100GE cards on the Huawei NE40 core routers.

The Juniper MX480 router recovered from London Slough was used to create the new Ho Chi Min POP in Vietnam.

The upgrade of the Cisco CRS8 in Hong Kong was completed to increase performance and to allow the inclusion of the 14x10GE cards required for ports expansion.

The migration of the circuits from the obsolete Cisco 12000 to the Cisco CRS has been completed in the Palermo POP, the Cisco 12000 routers have been abandoned in the following POPs: Catania, migrating the circuits on the Cisco ASR9010, Madrid, replaced with a Juniper MX104 recovered from Frankfurt and Miami, migrating the circuits on SDH cards recovered from Frankfurt and installed on the Juniper MX960; the obsolete 4x10GE cards of the Juniper MX960 routers of Rome North and Stockholm were dismantled and the circuits were migrated on 16x10GE boards recovered from other POPs.

New 4x100GE cards have been installed for Juniper MX960 Paris Equinix, the back-bone Frankfurt-Vienna ITX and 200G in Amsterdam EvoSwitch Milan have been expanded to 100G to support 100G customer activations.

The Roma POP of Namex replaced an obsolete Cisco 4900M device, used for aggregation of GigaEthernet accesses, with a new Juniper MX80, Have been inserted expansion cards of 100GE on the Juniper MX960 routers in Amsterdam, Paris, Sofia, Singapore, Miami and New York. On these last two sites the processor upgrades requested for performance increase were also performed.

In Singapore, a second POP IP was activated at Global Switch with a Juniper MX960.

The attestation of all access circuits of the Akamai caches Milan Malpaga has been completed, migrated from the TIM network to the Sparkle network.

The installation of the new Juniper MX960 router was completed in the Marseille POP within the new Interxion spaces. The project responds to the requirement presented by Maroc Telecom in the tender awarded to Sparkle, to certify incremental capacity on a third router in the same POP.

The economic competition between Juniper and Cisco for the new high-density (3T / slot) routers installed on the New York core, the Milan and Frankfurt edge was completed. The tender was awarded to Juniper with the new PTX10008 products, and the installation of the first PTX10008 in the Milan Caldera POP was completed.

With reference to TI Sparkle offer for Data Center / Cloud & services for multinational corporate the new hyperconvergent platform based on Nutanix technology was implemented at the Metamorfosi Athens datacenter for the fast, efficient and scalable delivery of IaaS services. A virtualized network layer was also introduced, based on Vmware NSX technology, to guarantee maximum isolation between workloads of different tenants and, at the same time, an efficient and fast delivery. The brokerage and automation platform, based on ODIN technology, has entered production and already hosts customers who purchase workloads on AWS via SSO; the development of the connector towards internal platforms based on Vmware vCloud Director is underway. Finally, computing and networking platforms (servers and routers), now obsolete and out of support, have been replaced in the data center of Yenibosna, Istanbul.

Work has been completed at the Catania datacenter for the implementation of the ICT Control Room, already operational in the implementation and assurance of the automation tools, programmability and network virtualization, as well as for the centralized monitoring of infrastructures for the provision of Cloud services.

The new firefighting system for the Data Center in Greece at Metamorfosi was completed, and the new air conditioning and power plant were completed.

For the provision of services to corporate companies, we note the expansion of the Giga Ethernet interface of IP VPN and Carrier Ethernet services at Frankfurt Interxion and Itenos, Rome and London through satellite technology.

Furthermore, the migration of the European MNCs backbone to a new transmission infrastructure was completed, including the PoPs in Milan, Paris, London and Frankfurt, with 10G band and dedicated routing to ensure improved performance for Top customers. Edge infrastructures have been renewed at the PoP in Bucharest of the Sparkle retail network, replacing the phase out technologies with new future proof routers for L2 and L3 VPN services. The new Edge layers are also completed in Madrid, Prague and Brussels and the 1/10 GE delivery activities are started in Milan, Frankfurt, Miami and Palermo.

For the provision of automation and virtualization services, the POD NFV-I physical installation was completed at DC Catania with the configuration of the OpenStack and the VNF delivery, the first use-case of vIMS signaling applications.

The server and switching infrastructure delivery phase was started for the PODs in Athens, Miami and Newark.

The activities of PoC for the study of SD-WAN solutions and Automation Engine for the what-if simulation of MPLS network traffic have been completed.

In the field of network automation, the Bandwidth on Demand Carrier Ethernet modeling and API according to the MEF standard was completed on the Network Service Orchestrator. The SCI & DCI Ethernet Suite services framework for Northbound communication was defined in this context.

With respect to voice and mobile, the VoIP call handling capacity has been increased (+ 32 thousand concurrent sessions) thanks to the network integration of a new SBC node at the Newark site and Milan. The Roaming VAS platform for Outbound Roaming Solution service (dual IMSI) was also adapted to support the expected traffic growth.

The new system for monitoring of VoIP traffic was completed, able to acquiring also the average component of calls and exporting elementary data to Big Data systems, for the creation of internal reports and to customers.

The software release of the SBC equipment has been adapted, so as to guarantee the continuity of the service on the SBC model 4500SD devices.

The functionality that allows the dynamic allocation of the numbering resources associated with the SIM cards of the users of the Outbound Roaming Solution service has been introduced on the Roaming VAS platform.

Networking activities were launched for the STP and DRA nodes in Netnumber technology to support international roaming signaling services.

The GTP Proxy platform was added to the network to increase the flexibility and optimize the management of the roaming data traffic of customers of the Outbound Roaming Solution service.

The introduction of a signaling traffic analysis tool to support international roaming has been completed. The purpose of this tool is to promptly identify sequences of signal messages generated artificially for the purpose of carry out fraudulent actions against mobile operators.

In 2018, the installation of the DWDM equipment for the lighting of the terrestrial fiber between the landing station of the GlobeNet submarine cable in Tuckerton (NJ) and the POP Miami has been completed, extending up to the Seabras-1 cable landing station in Wall.

A fiber ring in Florida that connects the landing station in Boca of the Globenet submarine cable (that of the submarine Cable SAM1 (Telxius) and the POP of Miami has been completed).

A transmission system was installed in the city of Cartagena (Colombia), the new PoP responds to the growing demand for capacity services in Colombia, providing local and international network operators, ISPs, content providers and OTT connectivity solutions up to 100G via the of Managed Bandwidth services.

The NJFX (New Jersey Fiber Exchange) Datacenter was added to the Sparkle network where, through the colocation equipment, we can offer 100G / 10G services and extend the IP services available to the NY POP.

The adjustment of the PoP of Sao Paulo c/o Equinix was completed, for the offer of 10G/100G services.

The upgrade of 600G of the submarine cables SAC and SAM1 and of 800G of the relative land backhaul in Brazil and Florida was realized for the activation of capacity between São Paulo and Miami.

***Brazilian Network***

Infrastructure is one of the strategic pillars for TIM Brasil group and efforts continue to offer more and better services. Recent changes in consumption patterns, as well as increasing demand for quality require a structured network expansion plan, supported by more robust technical analysis regarding consumption patterns and customer needs, as well as a transformation of corporate culture.

TIM Brasil capital expenditure for 2018 was almost 4 billion reais, of which more than 85% were dedicated to infrastructure (network and information technology) in order to guarantee the expansion of coverage and capacity, aiming to meet growing data traffic. Infrastructure improvements and growth are supported by various projects, among which are the expansion of fiber optic network, densification of sites, infrastructure virtualization VoLTE deployment, refarming of radiofrequency and the aggregation of carriers in two or three frequencies, depending on geographic location.

In the scope of spectrum usage, TIM Brasil continues its refarming project, aiming at achieve greater efficiency and better performance. In fiber, TIM Brasil continues to work on its network expansion project, to support the ultrabroadband converging network, increasing the availability of FTTH and FTTS.

TIM Brasil achieved, at the end of 2018, 841 *Biosites*, which are sustainable, cheaper structures that are easier to install and have no visual impact on cities. In the context of big data, TIM Brasil is constantly evolving its analytical tools for a more complete and proactive approach, aiming to achieve a more efficient deployment of investments.

**Item 4. Information On The TIM Group Description Of Property, Plant And Equipment**

TIM Brasil s coverage reached 93% of the urban population with its 4G network, achieving 3,272 cities with such technology, a 9.0% increase when compared with the same period of 2017, maintining it leadership in 4G coverage. To support this expansion, the number of 4G sites (e-NodeB elements) grew more than 38%, reaching almost double the number of 3G sites.

This significant expansion in 4G is supported by the implementation of spectrum refarming process, which uses the 1.8 GHz and 2.1 GHz bands and reorganizes the use of frequencies according to availability, redirecting them to the new technology (from 2G to 4G). This practice enables coverage optimization by deploying capital expenditures more efficiently.

Additionally, TIM Brasil continues to develop its LTE network through the use of the new 700MHz frequency, which is available in 1,426 cities. The 700 MHz band enables greater signal reach with higher download and upload speed, as well as lower latency, providing a significant improvement in customer experience. As it is a lower frequency, coverage reach can be four times greater when compared to 2,600 MHz band and provides greater penetration in indoor environments.

The network expansion on several fronts allows TIM Brasil to maintain its innovative approach and explore new technologies, such as VoLTE (Voice over LTE network) and Wireless-To-The-X (WTTX). TIM Brasil was the first operator in Latin America to offer VoLTE, a technology that allows calls traditionally carried out through circuits and that is already available in more than 2,500 cities, to evolve into IP data network, ensuring efficiency and stability. Other benefits to users include simultaneous navigation trough 4G, reduced battery consumption and shorter connection establishment time.

The use of WTTX technology that allows the commercialization of wireless broadband via LTE network, enabled TIM Brasil to increase its portfolio of residential solutions and it is already available in 123 cities. WTTX emerges as a quality choice to serve regions with underserved demand for broadband due to the lack of offers and to a fixed network infrastructure that is still under development. The user can navigate with stability and simple activation through a plug-and-play model. The release of this service and expansion was only possible due to TIM Brasil s investments in the 4G network.

With respect to corporate culture, new technologies and customer demands have resulted in a rupture in the traditional model of telecommunications operators. In light of these developments, TIM Brasil seeks to develop, motivate and engage its employees so that they can perform in a dynamic, innovative and collaborative environment, based on an agile and flexible operating model.

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**Item 4A. Unresolved Staff Comments**

## Item 4A. UNRESOLVED STAFF COMMENTS

None.

## Item 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

*The following discussion should be read in conjunction with the Consolidated Financial Statements included elsewhere in this Annual Report. Such financial statements have been prepared in accordance with IFRS as issued by the IASB.*

### 5.1 CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analyses of our financial condition and results of operations is based upon our Consolidated Financial Statements, which have been prepared in accordance with IFRS as issued by the IASB (designated as **IFRS** ). Our reported financial condition and results of operations as reported under IFRS are based on the application of accounting methods which involve the use of subjective assumptions and estimates that underlie the preparation of our financial statements. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily available. Actual results could differ, even significantly, from these estimates owing to possible changes in the factors considered in the determination of such estimates. Estimates are reviewed periodically.

In the absence of a Standard or an Interpretation that specifically applies to a particular transaction, management carefully considers subjective valuation techniques and uses its judgment as to the accounting methods to adopt with a view to providing financial statements which faithfully represent the economic substance of the transactions, are neutral, prepared on a prudent basis and complete in all material respects and in accordance with IFRS.

Since our selection and application of accounting policies involve judgments and other assumptions affecting the application of those policies, reported results are sensitive to changes in conditions or assumptions of management and these are factors to be considered when reading our Consolidated Financial Statements. We believe the critical accounting policies described below involve the most significant subjective assumptions and estimates used in the preparation of our Consolidated Financial Statements under IFRS.

**Revenue recognition**

Revenues are the gross inflows of economic benefits during the period arising in the course of the ordinary activities of an entity. Amounts collected on behalf of third parties such as sales taxes, goods and services taxes and value added taxes are not economic benefits which flow to the entity and do not result in increases in equity. Therefore, they are excluded from revenues.

The process underlying recognition of revenues follows the steps set out in IFRS 15:

- **identification of the contract**: takes place when the parties approve the contract (with commercial substance), identify the respective rights and obligations, this means that: the contract must be legally enforceable, the rights to receive goods and/or services and the terms of payment can be clearly identified and the Group deems receipt of payment as probable;

- **identification of the performance obligations**: the main identified performance obligations, namely the promises to transfer goods and services that are distinct, consist of services rendered (including voice and data traffic and ICT solutions) to retail customers, services rendered to wholesale customers and sale of products;

- **determination of the transaction price**: the total amount that has been contracted with the other party regarding the entire contractual term; the Group established that the contractual term is the one arising from the contractual constraints among the parties or, in the absence of such constraints, by convention, equal to one month;

- **allocation of the transaction price to the performance obligations**: the allocation is made proportionately to the respective stand-alone selling prices calculated based on the list prices (if present) or estimated by applying an appropriate margin to the cost of purchase/production of the good/service.

Transaction price related to activating the connectivity service is not a performance obligation; therefore it is allocated to the contractual performance obligations (typically to services).

For offerings which include the sale of devices and service contracts (bundle offerings), the Group allocates the contractual transaction price to the performance obligations of the contract, proportionately to the stand alone selling prices of the single performance obligations;

· **recognition of revenues**: revenues are stated net of discounts, allowances, and returns in connection with the characteristics of the type of revenue:

· ***Revenues from services rendered***

Revenues from services rendered are recognized in the separate income statements according to the stage of completion of the service, that is based on actual consumption.

Traffic revenues from interconnection and roaming are reported gross of the amounts due to other TLC operators.

Revenues for delivering information or other content are recognized on the basis of the amount invoiced to the customer, when the service is rendered directly by the Group. In the event that the Group is acting as agent (for example non-geographic numbers) only the commission received from the content provider is recognized as revenue.

Revenues from prepaid traffic are recorded on the basis of effective consumption. Deferred revenues for traffic already collected but not yet consumed are recorded in Trade and miscellaneous payables and other current liabilities in the consolidated statements of financial position.

Revenues for services rendered are generally invoiced and collected monthly (for retail customers) or in 40-60 days (for wholesale customers).

· ***Revenues from sales***

Revenues from sales (telephone and other products) are recognized on delivery, which represents the time of control transfer to the customers. The devices sold separately from services are invoiced at the time of delivery; collection takes place on demand or based on installment plans (up to 48 monthly installments). The devices sold as part of bundle offerings are invoiced at the time of delivery and usually collected in 24 monthly installments.

Some contracts (typically the sale of equipment by instalments) include an implicit financial component, which, if significant, results in a reduction in revenues recognized at the time of sale and the subsequent recognition of financial income at the time of collection of the related instalments; this component is determined by using a discount rate that reflects a hypothetical customer loan transaction at the contract date reflecting the creditworthiness by type of customer. The Group avails itself of the practical expedient of not recognizing said component if it is insignificant or the collection extension is less than 12 months.

Recognition of revenues may result in the recognition of a contract asset or liability. In particular:

- **Contract assets** represent the right to consideration in exchange for goods or services that the Group has transferred to a customer when that right is conditioned on something other than the passage of time.

- **Contract liabilities** represent the obligation to transfer goods or services to a customer for which the Group has received consideration (or the amount is due) from the customer.

Contract costs (incremental costs of obtaining a contract and costs to fulfill a contract; for example, the activation costs and the costs for sales network commissions) are extended and recognized in the consolidated income statements based on the expected term of the contractual relationship with the customers (on average, 3 years for the mobile business and 7 years for the fixed business). The TIM Group makes use of the practical expedient provided for by IFRS 15, which allows the incremental costs of obtaining a contract to be recorded in full in the consolidated income statement, if the period of deferral does not exceed 12 months.

**Allowance for doubtful accounts**

The impairment of trade receivables and contract assets is carried out through the simplified approach, which involves estimating the expected loss over the entire life of the receivable at the time of initial recognition and in subsequent valuations. For each customer segment, the estimate is mainly made by determining the average expected unrecoverable amount, based on historical-statistical indicators, adjusted if necessary using forward-looking elements. For certain categories of receivables with specific risk elements, specific valuations are carried out on individual credit positions.

If the financial condition of our customers were to deteriorate, our actual write-offs might be higher than we estimate.

**Accounting for tangible and intangible non-current assets**

Accounting for tangible and intangible non-current assets involves the use of estimates for determining fair value at the acquisition date in the case of assets acquired in a business combination and the expected useful lives of assets with a finite useful life. The determination of the fair values of assets, as well as the useful lives of the assets is based on management s judgment. Changes in the economic conditions of the markets in which we operate, technology and competitive forces could significantly affect the estimated useful lives of these assets and may lead to a difference in the timing and amount of depreciation and amortization expense.

**Acquisition accounting, goodwill and purchase price allocation**

We have entered into certain acquisitions and in the future may make further acquisitions. The calculation of the purchase price, and the subsequent allocation of that purchase price to the fair value of the assets acquired and liabilities assumed, is critical due to the long-term impact on the separate consolidated income statement.

Under IFRS, we are required to perform a purchase price allocation and, consequently, as part of that allocation, all consideration, including the fair value of exchanged shares, shall be valued. When equity instruments are issued as part of the consideration, under IFRS we measure them at their fair value as of the date of exchange.

The purchase price is then allocated to the fair value of the assets acquired and liabilities assumed.

The purchase price allocation requires that all assets and liabilities be recorded at fair values which requires significant estimates and judgments to be made. A change in any of these estimates or judgments could change the amount allocated to the assets and liabilities. The resulting change in the purchase price allocation to assets or liabilities has a direct impact on the final amount of the purchase price that is allocated to goodwill.

If actual results differ from these estimates, or we adjust the estimated economic useful lives, operating results could be significantly affected by these estimates and judgments which involve:

· the definition of the purchase price;

· the identification of the assets acquired and liabilities assumed in the acquisition;

· the valuation of these assets and liabilities in the purchase price allocation; and

· the assessment of whether selected assets have a finite or indefinite useful life.

These could have a significant impact on both the level of total goodwill and ultimately on the separate consolidated income statement.

**Impairment of assets**

The determination of impairment of intangible and tangible assets involves the use of estimates that include, but are not limited to, the cause, timing and amount of the impairment.

- ***Goodwill.*** Goodwill is tested for impairment at least annually or more frequently whenever events or changes in circumstances indicate that goodwill may be impaired, as set forth in IAS 36 (*Impairment of Assets*); however, when the conditions that gave rise to an impairment loss no longer exist, the original amount of goodwill is not reinstated.

The test is generally conducted at the end of every year so the date of testing is the year-end closing date of the financial statements. Goodwill acquired and allocated during the year is tested for impairment at the end of the year in which the acquisition and allocation took place.

To test for impairment, goodwill is allocated, at the date of acquisition, to each cash-generating unit or groups of cash-generating units which is expected to benefit from the acquisition.

Allocation is made to the lowest level at which goodwill is monitored for management purposes and that lowest level is not larger than the operating segment determined in accordance with IFRS 8 (*Operating Segments*).

If the carrying amount of the cash-generating unit (or group of cash-generating units) exceeds the recoverable amount, an impairment loss is recognized in the separate consolidated income statement. The impairment loss is first recognized as a deduction of the carrying amount of goodwill allocated to the cash-generating unit (or group of cash-generating units) and then only applied to the other assets of the cash-generating unit in proportion to their carrying amount, up to the recoverable amount of the assets with a finite useful life. The recoverable amount of a cash-generating unit (or group of cash-generating units) to which goodwill is allocated is the higher of fair value less costs to sell and its value in use.

In calculating the value in use, the estimated future cash flows are discounted to present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The future cash flows are those arising from an explicit time horizon between three and five years as well as those extrapolated to estimate the terminal value. The long-term growth rate used to estimate the terminal value of the cash-generating unit (or group of cash-generating units) is assumed not to be higher than the average long-term growth rate of the segment, country or market in which the cash-generating unit (or group of cash-generating units) operates.

The value in use of a cash-generating unit denominated in a foreign currency is estimated in the local currency by discounting cash flows to their present value on the basis of an appropriate rate for that currency. The present value obtained is translated to Euro at the spot rate on the date of the impairment test (in the case of the TIM Group, the date of the financial statements).

Future cash flows are estimated by referring to the current operating conditions of the cash generating unit (or group of cash-generating units) and, therefore, do not include either benefits originating from future restructuring for which the entity is not yet committed, or future investments for the improvement or optimization of the cash-generating unit.

For the purpose of calculating impairment, the carrying amount of the cash-generating unit is established based on the same criteria used to determine the recoverable amount of the cash-generating unit, excluding surplus assets (that is, financial assets, deferred tax assets and net non-current assets held for sale) and includes the goodwill attributable to non-controlling interests.

After conducting the goodwill impairment test for the cash-generating unit (or groups of cash-generating units), a second level of impairment testing is carried out which includes the corporate assets which do not generate positive cash flows and which cannot be allocated by a reasonable and consistent criterion to the single units. At this second level, the total recoverable amount of all cash-generating units (or groups of cash-generating units) is compared to the carrying amount of all cash-generating units (or groups of cash-generating units), including also those cash-generating units to which no goodwill was allocated, and the corporate assets.

For further details, see Note Goodwill of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

- ***Intangible and tangible assets with a finite useful life***. At every closing date, the Group assesses whether there are any indications of impairment of intangible and tangible assets with a finite useful life. Both internal and external sources of information are used for this purpose. Internal sources include obsolescence or physical damage, and significant changes in the use of the asset and the economic performance of the asset compared to estimated performance. External sources include the market value of the asset, changes in technology, markets or laws, trend in market interest rates and the cost of capital used to evaluate investments, and an excess of the carrying amount of the net assets of the Group over market capitalization. When indicators of impairment exist, the carrying amount of the assets is reduced to the recoverable amount. The recoverable amount of an asset is the higher of fair value less costs to sell and its value in use. In calculating the value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the cash-generating unit to which the asset belongs. Impairment losses are recognized in the separate consolidated income statement. When the conditions that gave rise to an impairment loss no longer exist, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, up to the carrying amount that would have been recorded had no impairment loss been recognized. The reversal of an impairment loss is recognized as income in the separate consolidated income statement.

The identification of impairment indicators, the estimation of future cash flows and the determination of fair values of assets or groups of assets (or cash-generating units) require management to make significant judgments including expected cash flows, applicable discount rates, useful lives and residual values. These estimates can have a material impact on fair value and the amount of any write-downs.

**Financial assets**

Financial assets include in particular investments, some of which are publicly traded and have highly volatile share prices. Generally, an impairment charge is recorded when an investment s carrying amount exceeds the present value of its estimated future cash flows. The calculation of the present value of estimated future cash flows and the determination of whether an impairment is other than temporary involve judgments and rely heavily on assessments by management regarding the future development and prospects of the investee company. In determining the value, quoted market prices are used, if available, or other valuation methodologies. To determine whether an impairment is other than temporary, we consider the ability and intent to hold the investment for a reasonable period of time to ascertain whether a forecasted recovery of fair value exceeds the carrying amount, including an assessment of factors such as the length of time and magnitude of the excess of carrying value over market value, the forecasted results of the investee company, the regional economic environment and state of the industry. Future adverse changes in market conditions, particularly a downturn in the telecommunications industry, or poor operating results could result in losses or an inability to recover the carrying amount of the investment, which could result in impairment charges.

**Derivative financial instruments**

We have entered into several different types of derivative contracts in order to manage our exposure to exchange rate and interest rate risks and to diversify the parameters of debt so that costs and volatility can be reduced to within pre-established operational limits. The changes in the fair value of derivatives which do not qualify for hedge accounting, fair value hedge derivatives and the ineffective portion of cash flow hedge derivatives are recognized in the separate consolidated income statement in the period of change. The gain or loss on the effective portion of qualifying cash flow hedges is recognized directly in a specific equity reserve. The cumulative gain or loss is removed from equity and recognized in the separate consolidated income statement at the same time the hedged transaction affects the separate consolidated income statement. The assessment of the fair value of a derivative contract requires the use of quoted market prices, banker price quotations, price quotations for similar instruments traded in different markets and, where applicable, pricing models. Pricing models and their underlying assumptions impact the amount and timing of unrealized gains and losses recognized. We rely on these pricing models when external fair values are unavailable. The estimates regarding future prices require estimating several factors, including interest rates, currency values and cash flows. Prices realized in the future could differ from these estimates, therefore producing different financial results.

**Provision for employee severance indemnity**

Employee severance indemnity, mandatory for Italian companies pursuant to art. 2120 of the Italian Civil Code, is a deferred compensation and is based on the employees years of service and the compensation earned by the employee during the service period.

Under IAS 19 (*Employee Benefits*), the employee severance indemnity is considered a Defined benefit plan . From January 1, 2007, Italian Law provided employees with the choice to direct their accruing indemnity either to supplementary pension funds or leave the indemnity as an obligation of the Company. Companies that employ at least 50 employees should transfer the employee severance indemnity to the Treasury fund managed by INPS, the Italian Social Security Institute.

Consequently, the Group s obligation to INPS and the contributions to supplementary pension funds take the form, under IAS 19, of a Defined contribution plan .

The obligation for the employee severance indemnity classified as a defined benefit plan is determined in accordance with actuarial methods. In the event that changes in assumptions are required, the future amounts of the post-employment benefit may be materially affected. A critical assumption to this accounting is the discount rate. Other assumptions include factors such as expected retirement date, mortality rate and estimates of inflation.

**Provisions and contingent liabilities**

We exercise considerable judgment in determining our exposure to and recognizing provisions for contingent liabilities related to pending litigations or other outstanding claims subject to negotiated settlement, mediation, arbitration or government regulation as well as other contingent liabilities.

Judgment is necessary in assessing the likelihood that a pending claim will succeed or a liability will arise and to quantify the possible range of the final settlement. Provisions are recorded for liabilities when losses are considered probable and can be reasonably estimated. Because of the inherent uncertainties in making such judgments, actual losses may be different from the originally estimated amount recognized. Significant estimates are involved in the determination of provisions related to taxes, environmental liabilities, our workforce reduction initiative and litigation risks. These estimates are subject to change as new information becomes available, primarily with the support of internal specialists or outside consultants, such as actuaries or legal counsel. Adjustments to loss provisions may significantly affect future operating results.

**Income tax expense and deferred tax assets**

The Group calculates income tax expense in each of the tax jurisdictions in which it operates. This process involves a jurisdiction-by-jurisdiction calculation of the current tax charge and an assessment of temporary differences resulting from the different treatment of certain items for consolidated financial and tax reporting purposes. Temporary differences result in the recognition of deferred tax assets or liabilities in the consolidated financial statements. Deferred tax assets are recognized to the extent that their realization is probable. The realization of deferred tax assets depends, among other things, on the company s ability to generate sufficient taxable income in future years and the reversal of taxable temporary differences, taking into account any restrictions on the carry-forward of tax losses. Various factors are used to assess the probability of the future realization of deferred tax assets, including future reversals of existing taxable temporary differences, past operating results, operational plans, loss carry-forward periods, and tax planning strategies. If actual results differ from these estimates or, if these estimates must be adjusted in future periods, the financial position and results of operations may be affected. In the event of a change in the assessment of future utilization of deferred tax assets, the recognized deferred tax assets must be increased or decreased, as the case may be, and the consequent effects recognized in the separate consolidated income statement, except to the extent that they relate to items directly charged or credited to equity, in which case the related effect is recognized in the relevant equity reserves.

## 5.2 RESULTS OF OPERATIONS FOR THE THREE YEARS ENDED DECEMBER 31, 2018

### 5.2.1 SIGNIFICANT TRENDS IMPACTING OUR CORE BUSINESSES

Intense competition continues to have a significant impact on the development of the business. Key trends affecting the core businesses are:

*Domestic Business Unit*

During 2018, the Italian telecommunications market showed signals of recession, mainly due to the entry of Iliad in the mobile market as the $4^{th}$ network infrastructured operator.

Due to a simplified offer particularly aggressive in terms of price and volume of data, Iliad has rapidly gained customers and consequently market share to the detriment of the other infrastructured operators, mainly WindTre and Vodafone, while TIM has highlighted a greater resilience also thanks to the contribution of the second-brand virtual operator Kena Mobile, launched in 2017.

The Iliad offer triggered the other operators to reduce prices and increase GB allowance with an impact not only on the mobile sector with the sudden increase of overall MNP exchange and ARPU dilution, but also on the fixed market, generating a price war to recover customer base lost on mobile.

On the other hand, broadband and ultrabroadband development has been confirmed as the main driver of market evolution and provides further growth opportunities for telecommunications operators with respect to the bundling of telecommunications services with Media & Entertainment, IT and Digital services.

In order to address these underlying macro trends, the 2019-2021 Strategic Plan (the Plan ) marks a discontinuity with the past and focuses on execution as a key element for the organic transformation of TIM. The Plan supports a renewed focus real competitive advantages (network quality, scale and client proximity, and technical competences and geographical presence) to promote sustainability. On the technological front, the Plan puts modernization, simplification and artificial intelligence at the core of future investments in order to ensure quality excellence and contain capital expenditure intensity. Quality and reliability at all customer touchpoints (activation, delivery and problem resolution) are as well at the centre of the strategy.

The main objectives over the Plan s horizon are the following:

- delevering the business;
- delivering a sustainable return on capital invested, strengthening cash flow generation through top line stabilization, leaner cost structure and working capital optimization;
- optimizing invested capital through network sharing, key to enhance ROIC;

· revamping Domestic business focusing on quality, TIM s scale and its technical competences; and

· enhancing Brasil riding growth waves and continuing towards postpaid migration.

*Brazil Business Unit*

In the year 2018 the Gross Domestic Product (GDP) growth expectation of 1.3%, according to the Central Bank Focus Report, when compared to a previous growth projection of 2.8%, at the end of 2017.

Inflation, measured by the Extended National Consumer Price Index (Índice de Preços ao Consumidor Amplo IPCA), continued under control, at 3.75% below the minimum target set by Central Bank, but with a slight growth when compared to 2017 (2.95%). Unemployment has decreased; however, consumer and business confidence still remain sensitive with the new government s ability to approve relevant reforms to fiscal adjustment. With the inflation below the target, the monetary policies was characterized by the basic interest rate (SELIC) stability at 6.5% per year.

### 5.2.2 BUSINESS SEGMENTS

The TIM Group reports its financial results on the basis of the following operating segments:

**Domestic**: includes operations in Italy for voice and data services on fixed and mobile networks for end customers (retail) and other operators (wholesale), the operations of the Telecom Italia Sparkle group (International wholesale), which, at international level (Europe, the Mediterranean and South America), develops fiber optic networks for wholesale customers, the operations of Olivetti (products and services for Information Technology), as well as INWIT S.p.A. (a company operating in the electronic communications infrastructure sector, and in particular the infrastructure for hosting radio transmission equipment for mobile telephone networks, both for TIM and other operators) and the units supporting the Domestic sector;

**Brazil**: includes mobile fixed telecommunications operations in Brazil (TIM S.A.);

**Other Operations**: includes finance companies and other minor companies not strictly related to the core business of the TIM Group.

In 2018 and 2017, there were no significant changes in the scope of consolidation of the TIM Group.

For a description of certain of these businesses, see Item 4. Information on the TIM Group 4.2 Business Units .

### 5.2.3 NON-GAAP FINANCIAL MEASURES

In this Annual Report on Form 20-F, in addition to figures presented in accordance with IFRS as issued by IASB, we disclose figures derived from IFRS that are non-GAAP financial measures ( **Non-GAAP Measures** ).

Such financial data is considered Non-GAAP financial measures as defined in Item 10(e) of Regulation S-K under the 1934 Act.

In this Annual Report the Non-GAAP Measure used relates to Net Financial Debt and 2018 Comparable Figures.

Management believes that these non-GAAP financial measures are useful as an additional tool to understand and assess the performance of the Company and should be reviewed in connection with the related GAAP financial measures and the reconciliation of non-GAAP financial measures to their most directly comparable GAAP financial measures set forth below and should be considered only as a supplement to, and not as a substitute for or as a superior measure to, measures of financial performance prepared in accordance with GAAP.

**Net Financial Debt** is a Non-GAAP financial measure as defined in Item 10(e) of Regulation S-K under the 1934 Act, but is widely used in Italy by financial institutions to assess liquidity and the adequacy of a company s financial structure. We believe that Net Financial Debt provides an accurate indicator of our ability to meet our financial obligations (represented by gross debt) by our available liquidity, represented by the other items shown in the reconciliation table. Net Financial Debt allows us to show investors the trend in our net financial condition over the periods presented. The limitation on the use of Net Financial Debt is that it effectively assumes that gross debt can be reduced by our cash and other liquid assets. In fact, it is unlikely that we would use all of our liquid assets to reduce our gross debt all at once, as such assets must also be available to pay employees, suppliers, and taxes, and to meet other operating needs and capital expenditure requirements. Net Financial Debt and its ratio to equity (including Non-controlling Interest), or leverage, are used to evaluate our financial structure in terms of sufficiency and cost of capital, level of debt, debt rating and funding cost, and whether our financial structure is adequate to achieve our business plan and our financial targets. Our management believes that our financial structure is sufficient to achieve our business plan and financial targets. See 5.3.2. Capital Resources .

Our management monitors the Net Financial Debt and leverage or similar measures as reported by other telecommunications operators in Italy and outside Italy, and by other major listed companies in Italy, in order to assess our liquidity and financial structure relative to such companies. We also monitor the trends in our Net Financial Debt and leverage in order to optimize the use of internally generated funds versus funds from third parties. Net Financial Debt is reported in our Italian Annual Report to shareholders and is used in presentations to investors and analysts.

Net Financial Debt is calculated as follows:

| | As of December 31, | | | | |
|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| | (millions of euros) | | | | |
| Non-current financial liabilities | 25,059 | 28,108 | 30,469 | 30,518 | 32,325 |
| Current financial liabilities | 5,913 | 4,756 | 4,056 | 6,224 | 4,686 |
| Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale | | | | 348 | 43 |
| **Gross financial debt (A)** | **30,972** | **32,864** | **34,525** | **37,090** | **37,054** |
| **Non-current financial assets (B)** | **(1,594)** | **(1,768)** | **(2,698)** | **(2,989)** | **(2,445)** |
| **Current financial assets:** | | | | | |
| Securities other than investments | (1,126) | (993) | (1,519) | (1,488) | (1,300) |
| Financial receivables and other current financial assets | (340) | (437) | (389) | (352) | (311) |
| Cash and cash equivalents | (1,917) | (3,575) | (3,964) | (3,559) | (4,812) |
| **Total current financial assets (C)** | **(3,383)** | **(5,005)** | **(5,872)** | **(5,399)** | **(6,423)** |
| **Financial assets relating to Discontinued operations/Non-current assets held for sale (D)** | | | | **(227)** | **(165)** |
| **Financial assets (E=B+C+D)** | **(4,977)** | **(6,773)** | **(8,570)** | **(8,615)** | **(9,033)** |
| **Net financial debt (A+E)** | **25,995** | **26,091** | **25,955** | **28,475** | **28,021** |

**2018 Comparable Figures** are shown in 2018, as the Group applied the accounting policies on a basis consistent with those of the previous years, except for the new standards and interpretations adopted by the Group since January 1, 2018.

To provide a supplemental year-on-year comparison of the financial performance for the year 2018 against 2017, the Group presents comparable income statement figures, prepared in accordance with the accounting standards in effect as of immediately prior to January 1, 2018 (including IAS 39, IAS 18, IAS 11, and relative Interpretations).

For further details, please see Note 2 Accounting Policies of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The impacts of the transition on the main line items of the consolidated statements of financial position are shown below.

| | As of December 31, 2017 Historical | IFRS 9 impact(*) | IFRS 15 impact(*) | As of January 1, 2018 Restated |
|---|---|---|---|---|
| | | (millions of euros) | | |
| **Assets** | | | | |
| **Non-current assets** | | | | |
| **Intangible assets** | | | | |
| Intangible assets with a finite useful life | 7,192 | | (110) | 7,082 |
| **Other non-current assets** | | | | |
| Non-current financial assets | 1,768 | | | 1,768 |
| Miscellaneous receivables and other non-current assets | 2,422 | | (269) | 2,153 |
| Deferred tax assets | 993 | 27 | | 1,020 |
| **Current assets** | | | | |
| Trade and miscellaneous receivables and other current assets | 4,959 | (147) | 42 | 4,854 |
| Current financial assets | 5,005 | | | 5,005 |
| **Total Assets** | 68,783 | (120) | (337) | 68,326 |
| **Equity and Liabilities** | | | | |
| **Equity** | | | | |
| Equity attributable to owners of the Parent | 21,557 | (100) | 17 | 21,474 |
| Non-controlling interests | 2,226 | (7) | 2 | 2,221 |
| **Total Equity** | **23,783** | **(107)** | **19** | **23,695** |
| **Non-current liabilities** | | | | |
| Miscellaneous payables and other non-current liabilities | 1,678 | | (251) | 1,427 |
| Deferred tax liabilities | 265 | (11) | 8 | 262 |
| **Current liabilities** | | | | |
| Trade and miscellaneous payables and other current liabilities | 7,520 | | (113) | 7,407 |
| Current income tax payables | 112 | (2) | | 110 |
| **Total Equity and liabilities** | **68,783** | **(120)** | **(337)** | **68,326** |

(*) For further details, see the specific notes to the Consolidated Financial Statements at December 31, 2018.
Following the adoption of IFRS 9, the different classification of financial assets had no substantial impact for the TIM Group on the measurement of those assets, while the introduction of the expected credit loss model replacing the incurred loss model required by IAS 39, resulted in a reduction of 107 million euros in consolidated equity at the transition date of January 1, 2018.

The comprehensive net impact (including tax effects) of the adoption of IFRS 15 on consolidated equity at January 1, 2018 (transition date) was a positive 19 million euros and mainly connected with the combined effects of:

- the change in the types of contract costs that are deferred;
- the new approach to recognizing activation/installation revenues and the recognition of contract assets connected with the earlier recognition of revenues from bundle offers.

**Impact of new accounting standards (IFRS 9 and IFRS 15) on the main line items of the separate consolidated income statements and consolidated statements of financial position for the year 2018**

The breakdown of the impact of the new accounting standards on key consolidated income statement figures for year 2018 is shown below.

| | | Year ended December | | |
|---|---|---|---|---|
| | | 2018 (a) | 2018 comparable (b) | New accounting standards impact (c=a-b) |
| | | | (millions of euros) | |
| Revenues | (1) | 18,940 | 19,109 | (169) |
| Operating expenses | (2) | (11,878) | (11,737) | (141) |
| Depreciation and amortization | (3) | (4,255) | (4,399) | 144 |
| **Operating profit (loss)** | | **561** | **727** | **(166)** |
| Other income (expenses) from investments | (4) | 11 | 10 | 1 |
| Finance income (expenses) | (5) | (1,348) | (1,341) | (7) |
| **Profit (loss) before tax from continuing operations** | | **(777)** | **(605)** | **(172)** |
| Income tax expense | (6) | (375) | (433) | 58 |
| **Profit (loss) for the year** | | **(1,152)** | **(1,038)** | **(114)** |
| Attributable to: | | | | |
| **Owners of the Parent** | | **(1,411)** | **(1,298)** | **(113)** |
| Non-controlling interests | | 259 | 260 | (1) |

1. The change in **Revenues** was attributable to the different accounting of bundle offers and activation/installation revenues and to the discounting of revenues from sales using the deferred payment method, using a discount rate reflecting the creditworthiness of customers.

2. The change in **Operating expenses** was mainly due to the deferral of certain subscriber acquisition costs and contract costs that were previously expensed and to the reclassification of some contract costs from intangible assets to other non-current and current assets (cost deferral), as well as higher provisions for expected losses on trade receivables, resulting from the introduction of an expected credit loss model (replacing the incurred loss model).

3. The change in **Depreciation and amortization** was due to the reclassification of certain contract costs from intangible assets to other non-current and current assets (cost deferral).

4. The change in **Other income (expenses) from investments** was due to the different accounting of the write-downs of the Other investments, which with the new standard are recognized under other components of the statements of comprehensive income.

5. The change in **Finance income (expenses)** was due to higher provisions for expected losses on other financial assets, due to the introduction of an expected credit loss model (replacing the incurred loss model).

6. The change in **Income tax expense** shows the income tax effect of the changes illustrated above.

The impact of the new accounting standards (IFRS 9 and IFRS 15) on the basic Earnings per Ordinary and Savings Share for the year 2018 is equal to -0.01 euros; instead, the impact is zero on diluted Earnings per Ordinary and Savings Share.

The breakdown of the impact of the new accounting standards on the main consolidated statements of financial position figures at December 31, 2018 is shown below.

| | As of December 31, | | New accounting standards impact (*) |
|---|---|---|---|
| | 2018 (a) | 2018 comparable (b) | (c=a-b) |
| | (millions of euros) | | |
| **Assets** | | | |
| **Non-current assets** | | | |
| Intangible assets | 35,658 | 35,771 | (113) |
| Tangible assets | 16,146 | 16,146 | |
| Other non-current assets | 5,086 | 5,368 | (282) |
| **Non-current assets** | **56,890** | **57,285** | **(395)** |
| **Current assets** | **8,729** | **8,794** | **(65)** |
| **Total Assets** | **65,619** | **66,079** | **(460)** |
| **Equity and Liabilities** | | | |
| **Equity** | | | |
| Equity attributable to owners of the Parent | 19,528 | 19,716 | (188) |
| Non-controlling interests | 2,219 | 2,225 | (6) |
| **Total Equity** | **21,747** | **21,941** | **(194)** |
| **Non-current liabilities** | 30,991 | 31,276 | (285) |
| **Current liabilities** | 12,881 | 12,862 | 19 |
| **Total Liabilities** | **43,872** | **44,138** | **(266)** |
| **Total Equity and liabilities** | **65,619** | **66,079** | **(460)** |

(*) For more details, see the information provided on impacts at the transition date.

### 5.2.4 Overview of 2018 Results of Operations

The following characterized the 2018 results in the Italian (domestic) market in in our Brazil Business Unit:

**Domestic.** In 2018, the Domestic market was affected by a new competitive and regulatory dynamic (entry of the fourth mobile operator and restoring of the 30-days billing) as well as the stabilization of wireline service revenues, supported by the growth of ultrabroadband customers and revenues from innovative services. This growth was countered by a decrease in revenues in mobile service, a sector impacted to a greater extent by the effects of the new dynamic.

**Brazil**. In the Brazilian market, 2018 continued to present strong results despite an economic recovery slower than previously expected and amid a more aggressive competitive environment. This resilience of operations was driven by a transformation of the customer base, a strong increase in the value proposition, greater incentive to loyalty offers and more expensive postpaid plans, the construction of the largest and best 4G network in Brazil and an efficiency-oriented approach to all activities.

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The following table sets forth our consolidated income statement for the years ended December 31, 2018, 2017 and 2016.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2018 comparable | 2017 | 2016 |
| | (millions of euros) | | | |
| Revenues | 18,940 | 19,109 | 19,828 | 19,025 |
| Other income | 341 | 341 | 523 | 311 |
| **Total operating revenues and other income** | **19,281** | **19,450** | **20,351** | **19,336** |
| Acquisition of goods and services | (8,186) | (8,089) | (8,388) | (7,793) |
| Employee benefits expenses | (3,105) | (3,084) | (3,626) | (3,106) |
| Other operating expenses | (1,259) | (1,236) | (1,208) | (1,083) |
| Change in inventories | 102 | 102 | 35 | 9 |
| Internally generated assets | 570 | 570 | 626 | 639 |
| Depreciation and amortization | (4,255) | (4,399) | (4,473) | (4,291) |
| Gains (losses) on disposals of non-current assets | (1) | (1) | 11 | 14 |
| Impairment reversals (losses) on non-current assets | (2,586) | (2,586) | (37) | (3) |
| **Operating profit (loss)** | **561** | **727** | **3,291** | **3,722** |
| Share of profits (losses) of associates and joint ventures accounted for using the equity method | (1) | (1) | (1) | (23) |
| Other income (expenses) from investments | 11 | 10 | (18) | 7 |
| Finance income | 1,056 | 1,047 | 1,808 | 2,543 |
| Finance expenses | (2,404) | (2,388) | (3,303) | (3,450) |
| **Profit (loss) before tax from continuing operations** | **(777)** | **(605)** | **1,777** | **2,799** |
| Income tax expense | (375) | (433) | (490) | (880) |
| **Profit (loss) from continuing operations** | **(1,152)** | **(1,038)** | **1,287** | **1,919** |
| Profit (loss) from Discontinued operations/Non-current assets held for sale | 0 | 0 | 0 | 47 |
| **Profit (loss) for the year** | **(1,152)** | **(1,038)** | **1,287** | **1,966** |
| **Attributable to:** | | | | |
| *Owners of the Parent* | *(1,411)* | *(1,298)* | *1,121* | *1,808* |
| *Non-controlling interests* | *259* | *260* | *166* | *158* |

### 5.2.5 BUSINESS UNIT FINANCIAL DATA

The table below sets forth revenues, operating profit (loss), capital expenditures and number of employees by Business Unit, for the periods indicated.

Following the change in the business mission of Persidera, the Media Business Unit was included into the Domestic Business Unit (Core Domestic) as of January 1, 2016.

| | | | Domestic | Brazil | Other Operations | Adjustments and eliminations | Consolidated Total |
|---|---|---|---|---|---|---|---|
| | | | (millions of euros, except number of employees) | | | | |
| | 2018 | | 15,031 | 3,943 | | (34) | 18,940 |
| Revenues (1) | 2018 | (comparable) | 15,185 | 3,959 | | (35) | 19,109 |
| | 2017 | | 15,354 | 4,502 | | (28) | 19,828 |
| | 2016 | | 15,006 | 4,047 | 11 | (39) | 19,025 |
| | 2018 | | 16 | 564 | (19) | | 561 |
| Operating profit (loss) | 2018 | (comparable) | 177 | 569 | (19) | | 727 |
| | 2017 | | 2,772 | 535 | (16) | | 3,291 |
| | 2016 | | 3,376 | 368 | (18) | (4) | 3,722 |
| | 2018 | | 5,518 | 890 | | | 6,408 |
| Capital expenditures on an accrual basis | 2018 | (comparable) | 5,634 | 924 | | | 6,558 |
| | 2017 | | 4,551 | 1,150 | | | 5,701 |
| | 2016 | | 3,709 | 1,167 | | | 4,876 |
| Number of employees at year-end (2) | 2018 | | 48,200 | 9,658 | 43 | | 57,901 |
| | 2017 | | 49,851 | 9,508 | 70 | | 59,429 |
| | 2016 | | 51,280 | 9,849 | 100 | | 61,229 |

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales (but after elimination of sales between companies within the same major business area).

(2) The number of employees at year-end excludes employees relating to the consolidated companies considered as Discontinued operations/Non-current assets held for sale, and includes personnel with temporary work contracts.

### 5.2.6 Year Ended December 31, 2018 compared With Year Ended December 31, 2017

v **REVENUES**

**Revenues** amounted to 18,940 million euros in 2018, a decrease of 888 million euros, or 4.5%, compared to 2017 (19,828 million euros). The decrease is mainly attributable to the Brazil Business Unit (-559 million euros), due to the depreciation of the Brazilian real of approximately 20% compared to 2017, and the Domestic Business Unit (-323 million euros). The adoption of IFRS 15 had a negative impact of 169 million euro on 2018 revenues (-154 million euro in Domestic Business Unit and -16 million euro in Brazil Business Unit).

Comparable revenues amounted to 19,109 million euros, down by 3.6%, or a decrease of 719 million euros from 19,828 million euros in 2017, removing the impact of the adoption of IFRS 15.

The table below sets forth for the periods indicated gross revenues by Business Unit and consolidated revenues.

| | Year ended December 31, | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2018 | 2018 | | 2017 | | Changes | |
| | Revenues[1] | Revenues comparable[1] (a) | % of Consolidated revenues | Revenues[1] (b) | % of Consolidated revenues | (a-b) | % |
| | (millions of euros, except percentages) | | | | | | |
| Domestic | 15,031 | 15,185 | 79.5 | 15,354 | 77.4 | (169) | (1.1) |
| *Core Domestic* | | *14,161* | *74.1* | 14,249 | *71.9* | *(88)* | *(0.6)* |
| *International Wholesale* | | *1,272* | *6.7* | 1,349 | *6.8* | *(77)* | *(5.7)* |
| Brazil | 3,943 | 3,959 | 20.7 | 4,502 | 22.7 | (543) | (12.1) |
| Other Operations[2] | | | | | | | |
| *Adjustments and eliminations* | (34) | *(35)* | *(0.2)* | *(28)* | *(0.1)* | *(7)* | |
| **Total Revenues** | **18,940** | **19,109** | **100.0** | **19,828** | **100.0** | **(719)** | **(3.6)** |

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales and after elimination of sales between companies within the same major business area.

(2) The Other Operations of the TIM Group consist of the financial companies and other minor companies not associated with the core business of the TIM Group.

### v OTHER INCOME

The following table sets forth other income for the years ended December 31, 2018 and 2017:

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2018 | 2018 comparable (a) | 2017 (b) | Changes (a-b) | % |
| | (millions of euros, except percentages) | | | | |
| Late payment fees charged for telephone services | 60 | 60 | 59 | 1 | 1.7 |
| Recovery of employee benefit expenses, purchases and services rendered | 27 | 27 | 22 | 5 | 22.7 |
| Capital and operating grants | 39 | 39 | 51 | (12) | (23.5) |
| Damages, penalties and recoveries connected with litigation | 29 | 29 | 40 | (11) | (27.5) |

| | | | | | |
|---|---|---|---|---|---|
| Partnership agreements and other arrangements with suppliers | 22 | 22 | 129 | (107) | (82.9) |
| Release of liabilities and other arrangements | 73 | 73 | 188 | (115) | (61.2) |
| Other | 91 | 91 | 34 | 57 | 167.6 |
| **Total other income** | **341** | **341** | **523** | **(182)** | **(34.8)** |

**Total other income** decreased by 182 million euros, or 34.8% from 523 million euros in 2017 to 341 million euros in 2018.

This decrease resulted from:

· minor contribution fees resulting from partnership agreements and other agreements with suppliers, designed to develop collaboration, in order to strengthen and stabilize industrial, commercial and real estate relations over time;

· 37 million euros recorded in 2018 by the Brazil Business Unit and concerning the positive effect of the tax recovery following the favorable outcome of the tax dispute relative to the unconstitutional grounds of the law that entailed the inclusion of ICMS indirect tax in the base for calculating taxes on PIS and COFINS revenues.

In 2017, the item also included an updated estimate of liabilities connected with customer and supplier accounts for a total of 112 million euros.

v **Operating Expenses**

**Operating expenses** increased by 1,660 million euros, or 9.7%, from 17,060 million euros in 2017 to 18,720 in 2018. This increase was mainly due to the goodwill impairment loss of 2,590 million euros attributable to the Domestic Business Unit, partially offset by the decrease in Acquisition of goods and services (202 million euros) and Employee benefits expenses (521 million euros).

Comparable operating expenses increased by 1,663 million euros, or 9.7%, from 17,060 million euros in 2017 to 18,723 million euros in 2018.

The components of our operating expenses are as follows:

· **Acquisition of goods and services** decreased by 202 million euros, or 2.4%, from 8,388 million euros in 2017 to 8,186 million euros in 2018. The decrease was principally attributed to the Brazil Business Unit for 322 million euros and was mainly due to a negative exchange rate effect.

Comparable acquisition of goods and services decreased by 299 million euros, or 3.6%, from 8,388 million euros in 2017 to 8,089 million euros in 2018.

The following table sets forth the acquisition of goods and services for the years ended December 31, 2018 and 2017:

| | **Year ended December 31,** | | | | |
|---|---|---|---|---|---|
| | **2018** | **2018 comparable (a)** | **2017 (b)** | **Changes (a-b)** | **%** |
| | **(millions of euros, except percentages)** | | | | |
| Acquisition of goods | 1,957 | 1,957 | 1,863 | 94 | 5.0 |
| Revenues due to other operators and interconnection costs | 1,913 | 1,913 | 2,073 | (160) | (7.7) |
| Commercial and advertising costs | 1,394 | 1,306 | 1,386 | (80) | (5.8) |
| Power, maintenance and outsourced services | 1,103 | 1,101 | 1,220 | (119) | (9.8) |
| Rent and leases | 607 | 607 | 645 | (38) | (5.9) |
| Other service expenses | 1,212 | 1,205 | 1,201 | 4 | 0.3 |
| **Total acquisition of goods and services** | **8,186** | **8,089** | **8,388** | **(299)** | **(3.6)** |
| *% on Revenues* | *43.2* | *42.3* | *42.3* | | |

For further details, please see Note 27 Acquisition of goods and services , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

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**Employee benefits expenses** decreased by 521 million euros, or 14.4%, from 3,626 million euros in 2017 to 3,105 million euros in 2018.

Comparable employee benefits expenses decreased by 542 million euros, or 14.9%, from 3,626 million euros in 2017 to 3,084 million euros in 2018.

The following table sets forth employee benefits expenses for the years ended December 31, 2018 and 2017:

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2018 | 2018 comparable (a) | 2017 (b) | Changes (a-b) | % |
| | (millions of euros, except percentages) | | | | |
| **Employee benefits expenses Italian companies:** | | | | | |
| Ordinary employee expenses and costs | 2,541 | 2,520 | 2,551 | (31) | (1.2) |
| Corporate restructuring expenses and other | 224 | 224 | 697 | (473) | n.s. |
| **Total employee benefits expenses Italy** | **2,765** | **2,744** | **3,248** | **(504)** | **(15.5)** |
| **Employee benefits expenses Outside Italy** | | | | | |
| Ordinary employee expenses and costs | 331 | 331 | 378 | (47) | (12.4) |
| Corporate restructuring expenses and other | 9 | 9 | | 9 | |
| **Total employee benefits expenses Outside Italy** | **340** | **340** | **378** | **(38)** | **(10.1)** |
| **Employee benefits expenses** | **3,105** | **3,084** | **3,626** | **(542)** | **(14.9)** |
| *% on Revenues* | *16.4* | *16.1* | *18.3* | | |

In particular the decrease of Employee benefits expenses relates to:

- the decrease of 473 million euros for restructuring expenses and allocations to employee and other provisions of the Italian component. Specifically, at the end of 2017 a plan was launched for executive and non-executive staff to adopt, among others, Article 4(1 7-ter) of Law 92 of June 28, 2012 (the Fornero Law , which provides for early retirement arrangements). During 2018, Plan take-up was greater than initially forecast, therefore estimates for staff leaving in 2019-2020 were revised, also taking into account social security changes made by Decree Law n. 2019/4.

- lower ordinary employee expenses for the Italian component, which fell by 10 million euros (-31 million euros on a comparable basis), mainly due to the benefits delivered by the reduction of the average salaried workforce by 1,447 employees (excluding the component relating to the solidarity agreement), which only in part were offset by the termination, at the start of 2018, of the defensive solidarity agreements applied by TIM S.p.A. The solidarity agreement was renewed in June 2018 for a further 12 months;

·

the decrease of 47 million euros in the component outside Italy of ordinary employee expenses, mainly due to the balance between the impact of the change in exchange rates and local remuneration dynamics of the Brazil Business Unit.

For further details, please see Note-Employee benefits expenses , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The Group s average salaried workforce for the periods indicated was as follows:

| | **Year ended December 31,** | | | |
|---|---|---|---|---|
| | **2018** | **2017** | **Changes** | |
| | **(a)** | **(b)** | **(a-b)** | **%** |
| | **(full time equivalent units, except percentages)** | | | |
| Average salaried workforce Italy | 45,058 | 45,648 | (590) | (1.3) |
| Average salaried workforce Foreign | 9,365 | 9,298 | 67 | 0.7 |
| **Total average salaried workforce(1)** | **54,423** | **54,946** | **(523)** | **(1.0)** |

(1) Includes the average employees with temporary work contracts: 0 units in 2018. In 2017, average employees with temporary work contracts were 2 units (1 in Italy and 1 outside Italy).

The Group s employees at December 31, 2018 and 2017 were as follows:

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2017 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (units, except percentages) | | | |
| Employees Italy | 48,005 | 49,689 | (1,684) | (3.4) |
| Employees Foreign | 9,896 | 9,740 | 156 | 1.6 |
| **Total Employees(1)** | **57,901** | **59,429** | **(1,528)** | **(2.6)** |

(1) No employees with temporary work contracts at December 31, 2018 and at December 31, 2017.

- **Other operating expenses** increased by 51 million euros, or 4.2%, from 1,208 million euros in 2017 to 1,259 million euros in 2018. In particular, Other operating expenses included 108 million euros relative to the Domestic Business Unit, mainly referred to the fine levied on May 8, 2018 in application of the Golden Power rule (Italian Decree Law no. 21 of 15/3/2012) and 27 million euros to the Brazil Business Unit for expenses concerning litigation.

Comparable other operating expenses increased by 28 million euros, or 2.3%, from 1,208 million euros in 2017 to 1,259 million euros in 2018.

The following table sets forth other operating expenses for the years ended December 31, 2018 and 2017.

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2018 | 2018 comparable | 2017 | Changes | |
| | | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | | |
| Write-downs and expenses in connection with credit management | 518 | 495 | 400 | 95 | 23.8 |
| Provision charges | 189 | 189 | 228 | (39) | (17.1) |
| TLC operating fees and charges | 286 | 286 | 356 | (70) | (19.7) |
| Indirect duties and taxes | 125 | 125 | 111 | 14 | 12.6 |
| Penalties, compensation and administrative fines | 73 | 73 | 33 | 40 | 121.2 |
| Association dues and fees, donations, scholarships and traineeships | 12 | 12 | 15 | (3) | (20) |
| Sundry expenses | 56 | 56 | 65 | (9) | (13.8) |
| **Total other operating expenses** | **1,259** | **1,236** | **1,208** | **28** | **2.3** |

| | | | | | |
|---|---|---|---|---|---|
| *% on Revenues* | *6.6* | *6.5* | *6.1* | | |

· **Depreciation and Amortization** decreased by 218 million euros, or 4.9%, from 4,473 million euros in 2017 to 4,255 million euros in 2018.

Comparable depreciation and amortization decreased by 74 million euros, or 1.7%, from 4,473 million euros in 2017 to 4,399 million euros in 2018.

The following table sets forth depreciation and amortization for the years ended December 31, 2018 and 2017.

| | **Year ended December 31,** | | | | |
|---|---|---|---|---|---|
| | **2018** | **2018 comparable (a)** | **2017 (b)** | **Changes (a-b)** | **%** |
| | **(millions of euros, except percentages)** | | | | |
| Amortization of intangible assets with a finite useful life | 1,599 | 1,743 | 1,793 | (50) | (2.8) |
| Depreciation of tangible assets owned and leased | 2,656 | 2,656 | 2,680 | (24) | (0.9) |
| **Total depreciation and amortization** | **4,255** | **4,399** | **4,473** | **(74)** | **(1.7)** |
| *% on Revenues* | *22.5* | *23.2* | *22.6* | | |

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Further details are provided in the Note Tangible assets (owned and under finance leases) and Note Intangible assets with a finite useful life of the Notes to the Consolidated Financial Statements, included elsewhere herein.

· Gains (losses) on disposals of non-current assets

In 2018, this item was a negative of 1 million euros. In 2017, this item was a positive 11 milllion euros.

· Net impairment losses on non-current assets

This item amounted to 2,586 million euros in 2018 and mainly refers to the goodwill impairment loss of 2,590 million euros attributable to the Domestic Business Unit.

In accordance with IAS 36, goodwill is not subject to amortization, but is tested for impairment on at least an annual basis, when preparing the company s consolidated financial statements. At September 30, 2018, with reference to the Core Domestic Cash-Generating Unit, internal and external events and circumstances had arisen that led the company to carry out impairment testing on the CGU, with a recognition of an Impairment loss relative to the Core Domestic Unit for an amount of 2,000 million euros.

In the 2018 Financial Statements, the annual impairment test resulted in an additional impairment loss of 450 million euros on the goodwill attributed to the Core Domestic Cash-Generating Unit, therefore the total impairment loss for the financial year 2018 amounted to 2,450 million euros, as well as an impairment loss of 140 million euros on the goodwill attributed to the International Wholesale Cash-Generating Unit.

An increase or decrease in the discount rate used in the discounted cash flow for Core Domestic CGU of 0.1%, would result in a change (decrease or increase) of the recoverable amount of approximately 700 million euros. Management has determined that there are no reasonable possible changes to other key assumptions (i.e. growth rate and Capex/Revenues ratio) that could cause an additional material impairment.

With reference to the Brazil Cash Generating Units, the Impairment test exercise did not show any impairment losses to the Goodwill allocated to the said CGUs.

In 2017, net impairment losses on non-current assets amounted to 37 million euros and mainly consisted of write-downs of intangible assets.

For further details please see Note-Goodwill of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

v **OPERATING PROFIT (LOSS)**

In 2018, **Operating profit** was 561 million euros, compared to 3,291 million euros in 2017, a decrease of 2,730 million euros (-82.9%) compared to 2017. The Operating profit margin was 3.0% (16.6% in 2017).

Comparable Operating profit for 2018 totaled 727 million euros (3,291 million euros for 2017), a decrease of 2,564 million euros (-77.9%) compared to 2017. The Operating profit margin was 3.8% (16.6% in 2017).

In 2018 and 2017, the TIM Group recognized certain net operating expenses connected to events and transactions that by their nature do not occur on an ongoing basis in the normal course of operations and which have been shown because their amount is significant. Such expenses include the goodwill impairment loss, corporate restructuring and reorganization expenses, resulting from regulatory disputes and sanctions and the liabilities related to those expenses, for disputes with former employees, and liabilities with customers and/or suppliers, as well as items related to adjustments relative to previous years.

In detail:

| | Year ended December 31, | |
|---|---|---|
| | 2018 | 2017 |
| | (millions of euros) | |
| **Revenues:** | | |
| Revenue adjustments of previous years | **62** | |
| **Other income:** | | |
| Brazil Business Unit Tax recovery effect | **(37)** | |
| **Acquisition of goods and services and Change in inventories** | | |
| Professional expenses, consulting services and other costs | **15** | **10** |
| **Employee benefits expenses** | | |
| Expenses related to restructuring, rationalization and other | **233** | **697** |
| **Sundry expenses and provisions** | | |
| Goodwill impairment loss on Core Domestic and International Wholesale | **2,590** | |
| Expenses related to disputes and regulatory penalties and liabilities related to those expenses, and expenses related to disputes with former employees and liabilities with customers and/or suppliers | **135** | **176** |
| Impairment losses on intangible assets | | **30** |
| **Impact on Operating profit** | **2,998** | **913** |

Net expenses in 2018 included:

- the goodwill impairment loss attributed to the Core Domestic unit and International Wholesale (2,590 million euros);
- expenses related to company restructuring processes (233 million euros);
- sundry expenses for 135 million euros including provisions to cover a fine of 74.3 million euros levied for alleged infringement of Article 2 of Italian Decree Law 21 of March 15, 2012 (the Golden Power rule) under a ruling of May 8, 2018. TIM lodged an appeal with the Lazio Regional Administrative Court (TAR), requesting the precautionary suspension of the decision. In July 2018, the TAR granted the application and suspended payment of the fine, setting a date for the appeal to be heard;
- the adjustment of some contractual liabilities in order to align them with their estimated period end value. Specifically, liabilities relative to prepaid contracts were adjusted by a total of 62 million euros, wholly

attributable to previous financial years;

- the positive effect of the Brazil Business Unit tax recovery, equal to 37 million euros, following the favorable outcome of the tax dispute relative to the unconstitutional grounds of the law that entailed the inclusion of ICMS indirect tax in the base for calculating taxes on PIS and COFINS revenues.

Expenses in 2017 mainly included provisions for the start-up of the company restructuring plan of TIM S.p.A.

v **SHARE OF PROFITS (LOSSES) OF ASSOCIATES AND JOINT VENTURES ACCOUNTED FOR USING THE EQUITY METHOD**

Shares of losses of associates and joint ventures accounted for using the equity method amounted to 1 million euros in 2018 and in 2017.

v **INCOME (EXPENSES) FROM INVESTMENTS**

In 2018, this item amounted to an income of 11 million euros and mainly included the dividends paid to TIM S.p.A. by the Emittenti Titoli company.

In 2017, this item amounted to an expense of 18 million euros and essentially included the allocation to the income statement of the Reserve for exchange differences on translating foreign operations for the investee company Tierra Argentea S.A., the liquidation of which was completed that year.

v **FINANCE INCOME (EXPENSES), NET**

Finance income (expenses) show a net expense of 1,348 million euros (expense of 1,495 million euros in 2017). The improvement was mainly due to lower finance expenses, connected to the reduction in the Group s average debt exposure and a positive effect in interest rates from the refinancing operations carried out over the last 12 to 18 months.

For further details about finance income and finance expenses, please see Note Finance income and Finance expenses of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

v **INCOME TAX EXPENSE**

This item amounted to 375 million euros, a decrease of 115 million euros as compared to 2017 (490 million euros). In particular, 2018 benefited from approximately 200 million euros contributed by the Brazil Business Unit, from the recognition of deferred tax assets related to the tax recoverability of past losses recorded in previous years that had become recoverable based on the expected profits. This impact was offset by the Parent TIM S.p.A. s higher taxes, in relation to the impact of certain items in the 2018 fiscal year which have no tax relevance (mainly driven by goodwill impairment loss and other non-deductible sundry expenses and minor benefits).

### 5.2.7 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2018 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2017

v **DOMESTIC**

The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2018 and 2017.

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2018 | 2018 comparable | 2017 | Changes | |
| | | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages and employees) | | | | |
| Revenues | 15,031 | 15,185 | 15,354 | (169) | (1.1) |
| Operating profit (loss) | 16 | 177 | 2,772 | (2,595) | (93.6) |
| *% of Revenues* | *0.1* | *1.2* | *18.1* | | |
| Employees at year-end (units) | 48,200 | | 49,851 | (1,651) | (3.3) |

**Revenues**

**Revenues** amounted to 15,031 million euros in 2018 and decreased by 323 million euros, or 2.1%, compared to 2017 (15,354 million euros). The adoption of IFRS 15 had a negative impact of 154 million euro on 2018 revenues.

Comparable revenues decreased by 169 million euros, or 1.1%, from 15,354 million euros in 2017 to 15,185 million euros in 2018.

The **revenues from services** amounted to 13,650 million euros (-350 million euros compared to 2017, or -2.5%), impacted by the effects of a changed regulatory and competitive scenario (30-day pricing restored, entry of a fourth mobile operator and a reduction in the prices of some wholesale services). In detail:

· **revenues from services for the fixed-line market** amounted to 9,875 million euros, a decrease of 77 million euros, or 0.8%, compared to 2017, notwithstanding stronger market competition.

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Comparable revenues from services for the fixed-line market remaining stable with respect to 2017 (9,951 million euros in 2018).

Such stabilization was due to higher retail ARPU, higher revenues from ICT solutions (+99 million euros compared to 2017, or 14.8%) and from innovative services for data connectivity (+306 million euros, or 14.4%), also due to the growth in Ultrabroadband customers (+1.0 million compared to 2017) that at the end of 2018 reached 3.2 million (5.4 million including wholesale lines). These dynamics offset the natural decline in revenues from traditional voice services (-334 million euros), due to the decrease in traditional accesses and lower regulated prices on some wholesale services (-65 million euros);

- **revenues from services for the Mobile market** amounted to 4,405 million euros (a decrease of 250 million euros compared to 2017 or 5.4%).

Comparable revenues from services for the mobile market amounted to 4,513 million euros (a decrease of 142 million euros compared to 2017, or 3.1%).

Revenues from services for the mobile market were affected to a greater extent by the changed regulatory and competitive scenario, with a decrease in calling and broadband ARPU.

**Revenues from product sales**, including the change in work in progress, amounted to 1,381 million euros in 2018 (an increase of 27 million euros compared to 2017).

Comparable revenues from product sales amounted to 1,351 million euros (a decrease of 3 million euros compared to 2017).

**Other income**

In 2018, other income decreased by 198 million euros, from 471 million euros in 2017 to 273 million euros in 2018. This item includes contribution fees resulting from partnership agreements, insurance indemnities and adjustments to estimated liabilities connected with customers and supplier accounts.

| | **2018** | **2017** | **Changes** | |
|---|---|---|---|---|
| | **(a)** | **(b)** | **(a-b)** | **%** |
| | **(millions of euros, except percentages)** | | | |
| Late payment fees charged for telephone services | 49 | 48 | 1 | 2.1 |
| Recovery of employee benefit expenses, purchases and services rendered | 27 | 22 | 5 | 22.7 |
| Capital and operating grants | 33 | 44 | (11) | (25.0) |
| Damages, penalties and recoveries connected with litigation | 28 | 39 | (11) | (28.2) |
| Partnership agreements and other arrangements with suppliers | 22 | 97 | (75) | (77.3) |
| Release of liabilities and other arrangements | 75 | 192 | (117) | (60.9) |
| Other | 39 | 29 | 10 | 34.5 |

| | | | |
|---|---|---|---|
| **Total other income** | **273** | **471** | **(198)** |

**Operating profit**

Operating profit for the Domestic Business Unit in 2018 amounted to 16 million euros (2,772 million euros in 2017), a decrease of 2,756 million euros, with the Operating profit margin at 0.1% (18.1% in 2017).

Comparable Operating profit in 2018 amounted to 177 million euros (2,772 million euros in 2017), a decrease of 2,595 million euros, with the Operating profit margin at 1.2% (18.1% in 2017).

Operating profit in 2018 reflected the negative impact of non-recurring net expenses, including the aforesaid impairment loss on goodwill of the Core Domestic unit and International Wholesale totaling 2,998 million euros.

Operating profit was also impacted by the change in the following line items included under operating expenses and shown in the table below.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2018 | 2017 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | |
| Acquisition of goods and services | 6,360 | 6,235 | 125 | 2.0 |
| Employee benefits expenses | 2,781 | 3,266 | (485) | (14.8) |
| Other operating expenses | 763 | 704 | 59 | 8.4 |

In detail:

- **acquisition of goods and services** increased by 125 million euros compared to 2017. Costs for the acquisition of goods increased mainly due to higher purchasing volumes of equipment and handsets linked to the increase in product sales and to higher commercial and advertising costs, offset by a reduction in costs for energy and outsourced services, as a result of streamlining actions taken during the year.

- **employee benefits expenses** decreased by 485 million euros, due to the same factors that impacted italian employee benefits expenses at the Group level;

- **other operating expenses** increased by 59 million euros, compared to 2017. Other operating expenses include 108 million euros (176 million euros in the 2017), mainly referring to the fine imposed on May 8, 2018 in the application of Decree Law 15/3/2012 n. 21 ( Golden Power ), this item also includes higher provision charges for bad debts compared to 2017 mainly attributable to difficulties and delays in the receipts of some South American and Mediterranean Basin operators.

**Employees**

The number of employees in the Domestic Business Unit was 48,200 as of December 31, 2018, a reduction of 1,651 employees compared to December 31, 2017.

* * *

The principal operating and financial data of the Domestic Business Unit are reported according to the two cash-generating units ( **CGU** ): Core Domestic and International Wholesale Telecom Italia Sparkle group.

Revenues and operating profit in 2018 and in 2017 were as follows:

**Core Domestic**

| | Year ended December 31, 2018 (a) | 2017 (b) | Changes (a-b) | % |
|---|---|---|---|---|
| | (millions of euros, except percentages) | | | |
| Revenues | 14,008 | 14,249 | (241) | (1.7) |
| Operating profit | 173 | 2,736 | (2,563) | (93.7) |

**Revenues for the Core Domestic** Cash-Generating Unit amounted to 14,008 million euros in 2018 and decreased by 241 million euros compared to 2017 (14,249 million euros). Such decrease is mainly related to due to the changed competitive and regulatory scenario (entry of a fourth mobile operator, 30-day pricing restored).

**International Wholesale**

| | Year ended December 31, 2018 (a) | 2017 (b) | Changes (a-b) | % |
|---|---|---|---|---|
| | (millions of euros, except percentages) | | | |
| Revenues | 1,272 | 1,349 | (77) | (5.7) |
| Operating profit | (144) | 37 | (181) | |

**Revenues for the International Wholesale** Cash-Generating Unit amounted to 1,272 million euros in 2018 and decreased by 77 million euros compared to 2017 (1,349 million euros). Such decrease is mainly related to the downturn in revenues from traditional telephone services and to the expiry of long-term contracts relative to the Mediterranean Basin area (IP/Data services).

v **BRAZIL**

The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2018 and 2017.

| | Year ended December 31, | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2018 | 2018 comparable (a) | 2017 (b) | 2018 | 2018 comparable (c) | 2017 (d) | Changes (c-d) | (c-d)/d% |
| | (millions of euros, except percentages and employees) | | | (millions of Brazilian reais, except percentages and employees) | | | | |
| Revenues | 3,943 | 3,959 | 4,502 | 16,981 | 17,050 | 16,234 | 816 | 5.0 |
| Operating profit | 564 | 569 | 535 | 2,428 | 2,449 | 1,931 | 518 | 26.8 |
| *% of Revenues* | *14.3* | *14.4* | *11.9* | *14.3* | *14.4* | *11.9* | | |
| Employees at year-end (units) | | 9,658 | 9,508 | | 9,658 | 9,508 | 150 | 1.6 |

**Revenues**

Revenues for 2018 amounted to 16,981 million reais, an increase of 747 million reais (+4.6% compared to 2017).

Comparable revenues for 2018, amounted to 17,050 million reais, an increase of 816 million reais (+5.0% compared to 2017).

Total lines in place at December 31, 2018 amounted to 55.9 million, a decline of 2.7 million compared to December 31, 2017 (58.6 million). The lower figure was driven entirely by the prepaid segment (-5.1 million), only partially offset by growth in the post-paid segment (+2.4 million), in part due to the consolidation underway in the market for second SIM cards. Postpaid customers accounted for 36.2% of the customer base at December 31, 2018, an increase of 5.8 percentage points on December 2017 (30.4%).

**Operating profit**

Operating profit amounted to 2,428 million reais in 2018, an increase of 497 million reais (+25.7%) compared to 2017 (1,931 million reais). Growth in Operating profit was attributable to both the positive performance of revenues and the benefits delivered by projects to enhance the efficiency of the operating expenses structure.

Comparable operating profit in 2018 amounted to 2,449 million reais, an increase of 518 million reais (+26.8%) compared to 2017 (1,931 million reais).

With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2018 and 2017.

| | Year ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2018 (a) | 2017 (b) | Changes (a-b) | % |
| | (millions of euros) | | (millions of Brazilian reais, except percentages) | | | |
| Acquisition of goods and services | 1,846 | 2,168 | 7,949 | 7,816 | 133 | 1.7 |
| Employee benefits expenses | 317 | 353 | 1,364 | 1,274 | 90 | 7.1 |
| Other operating expenses | 491 | 500 | 2,114 | 1,805 | 309 | 17.1 |
| Change in inventories | (14) | 6 | (59) | 20 | (79) | |

- **acquisition of goods and services** increased by 133 million reais, or 1.7%, from 7,816 million reais in 2017 to 7,949 million reais in 2018;

- **employee benefits expenses**, increased by 90 million reais, or 7.1%, from 1,274 million reais in 2017 to 1,364 million reais in 2018. The increase was mainly due to the inflation of the previous year, which updated the wage and benefits base, as well as higher number of employees (+1.6%);

- **other operating expenses** increased by 309 million reais, or 17.1%, from 1,805 million reais in 2017 to 2,114 million reais in 2018;

**Employees**

Employees in the Brazil Business Unit were 9,658 units at December 31, 2018, an increase of 150 units compared to December 31, 2017 (9,508 units).

### 5.2.8 YEAR ENDED DECEMBER 31, 2017 COMPARED WITH YEAR ENDED DECEMBER 31, 2016

v **REVENUES**

**Revenues** increased by 803 million euros, or 4.2%, from 19,025 million euros in 2016 to 19,828 million euros in 2017. This increase was mainly attributable to an increase of 455 million euros in the Brazil Business Unit, which included a positive exchange rate effect of 284 million euros. Revenues for the Domestic Business Unit increased by 348 million euros.

The table below sets forth for the periods indicated gross revenues by Business Unit and consolidated revenues.

| | Year ended December 31, 2017 Revenues(1) (a) | 2017 % of Consolidated revenues | 2016 Revenues(1) (b) | 2016 % of Consolidated revenues | Changes (a-b) | Changes % |
|---|---|---|---|---|---|---|
| | (millions of euros, except percentages) | | | | | |
| Domestic | 15,354 | *77.4* | 15,006 | 78.9 | 348 | 2.3 |
| *Core Domestic* | 14,249 | *71.9* | 13,926 | 73.2 | 323 | 2.3 |
| *International Wholesale* | *1,349* | *6.8* | *1,351* | *7.1* | *(2)* | *(0.1)* |
| Brazil | 4,502 | 22.7 | 4,047 | 21.3 | 455 | 11.2 |
| Other Operations(2) | 0 | 0.0 | 11 | 0.1 | (11) | (100.0) |
| *Adjustments and eliminations* | *(28)* | *(0.1)* | *(39)* | *(0.3)* | *11* | *(28.2)* |
| **Total Revenues** | **19,828** | **100.0** | **19,025** | **100.0** | **803** | **4.2** |

(1) Revenues are total revenues of the various business units of the TIM Group before elimination of intercompany sales and after elimination of sales between companies within the same major business area.

(2) The Other Operations of the TIM Group consist of the financial companies and other minor companies not associated with the core business of the TIM Group.

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v **OTHER INCOME**

The following table sets forth other income for the years ended December 31, 2017 and 2016:

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | |
| Late payment fees charged for telephone services | 59 | 60 | (1) | (1.7) |
| Recovery of employee benefit expenses, purchases and services rendered | 22 | 33 | (11) | (33.3) |
| Capital and operating grants | 51 | 36 | 15 | 41.7 |
| Damages, penalties and recoveries connected with litigation | 40 | 24 | 16 | 66.7 |
| Partnership agreements and other arrangements with suppliers | 129 | 71 | 58 | 81.7 |
| Release of liabilities and other arrangements | 188 | | 188 | |
| Other income | 34 | 87 | (53) | |
| **Total other income** | **523** | **311** | **212** | **68.2** |

Total other Income increased by 212 million, or 68.2% from 311 million euros in 2016 to 523 million euros in 2017. This increase resulted from the impact of contribution fees derived from partnership agreements signed with leading technology suppliers. These agreements are aimed at developing the collaboration between the parties, in order to strengthen and stabilize the business and industrial relationship over time, to actively contribute to TIM s marketing plan for the development and use of several strategic services in Italy and in Brazil. The item also included insurance indemnities and updated estimates of liabilities connected with customer and supplier accounts.

v **OPERATING EXPENSES**

Operating expenses increased by 1,446 million euros, or 11.2%, from 15,614 million euros in 2016 to 17,060 million euros in 2017.

The components of our operating expenses are as follows:

· **Acquisition of goods and services** amounted to 8,388 million euros in 2017, an increase of 595 million euros compared to 2016 (7,793 million euros).

The following table sets forth the acquisition of goods and services for the years ended December 31, 2017 and 2016:

| Year ended December 31, | | | |
|---|---|---|---|
| 2017 | 2016 | Changes | |
| (a) | (b) | (a-b) | % |

| | (millions of euros, except percentages) | | | |
|---|---|---|---|---|
| Purchase of goods | 1,863 | 1,614 | 249 | 15.4 |
| Portion of revenues to be paid to other operators and interconnection costs | 2,073 | 2,012 | 61 | 3.0 |
| Commercial and advertising costs | 1,386 | 1,231 | 155 | 12.6 |
| Power, maintenance and outsourced services | 1,220 | 1,218 | 2 | 0.2 |
| Rent and leases | 645 | 616 | 29 | 4.7 |
| Other service expenses | 1,201 | 1,102 | 99 | 9.0 |
| **Total acquisition of goods and services** | **8,388** | **7,793** | **595** | **7.6** |
| *% on Revenues* | *42.3* | *41.0* | | |

The increase in Acquisition of goods and services was driven by the Domestic Business Unit, for a total of 450 million euros, primarily by the acquisition of products for resale. The Brazil Business Unit reported an increase of 140 million euros, attributable entirely to the exchange rate effect, without which the item would have shown a drop of around 3 million euros.

For further details, please see Note-Acquisition of goods and services , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

· **Employee benefits expenses**

The following table sets forth employee benefits expenses for the years ended December 31, 2017 and 2016:

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 (a) | 2016 (b) | Changes (a-b) | % |
| | (millions of euros, except percentages) | | | |
| **Employee benefits expenses Italian companies:** | | | | |
| Ordinary employee expenses and costs | 2,551 | 2,600 | (49) | (1.9) |
| Corporate restructuring expenses | 697 | 144 | 553 | n.s. |
| **Total employee benefits expenses Italy** | **3,248** | **2,744** | **504** | **18.4** |
| **Employee benefits expenses Outside Italy** | | | | |
| Ordinary employee expenses and costs | 378 | 347 | 31 | 8.9 |
| Corporate restructuring expenses | | 15 | (15) | |
| **Total employee benefits expenses Outside Italy** | **378** | **362** | 16.0 | 4.4 |
| **Total employee benefits expenses** | **3,626** | **3,106** | **520** | **16.7** |
| *% on Revenues* | *18.3* | *16.3* | | |

Employee benefits expenses increased by 520 million euros, or 16.37% from 3,106 million euros in 2016 to 3,626 million euros in 2017. This increase resulted from:

- a decrease of 49 million euros in the Italian component of ordinary employee expenses, partly as a result of the reduction in the average salaried workforce by 1,517 employees. By contrast, in 2016, following the non-fulfillment of the conditions for the payment of the Results Bonus to employees, related accruals made in the 2015 financial statements were reversed;
- the recognition of a total of 697 million euros relating to provisions to Employee benefits and sundry expenses, of which 674 million euros were related to the commencement of the new company restructuring

plan for TIM S.p.A. which will unfold over the course of the 2018 2020 Strategic Plan and is designed to support the digitization process by drawing on all measures provided by law. Specifically, the plan will involve, *inter alia,* the application of Article 4 (1 7-ter) of the Fornero Law (Law 92 of June 28, 2012) for executive and non-executive personnel, which provides for early retirement arrangements, as well as the use of other measures contributing to the economic sustainability of the Plan. In 2016, a total of 144 million euros in provisions for expenses were allocated for the application of Article 4 of the Fornero Law and the management restructuring plan;

- an increase of 16 million euros in employee benefits expenses in the component outside Italy; the lower cost of labor connected with the drop in the average salaried workforce outside Italy by 1,392 average employees was offset by both local wage growth and the exchange rate effect primarily from the Brazil Business Unit, which had higher cost of approximately 24 million euros. In the previous year, the Brazil Business Unit had recognized a total of 16 million euros (at constant exchange rates) in expenses relating to the implementation of the company restructuring plan.

For further details, please see Note-Employee benefits expenses , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

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The Group s average salaried workforce for the periods indicated was as follows:

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (full time equivalent units, except percentages) | | | |
| Average salaried workforce Italy | 45,648 | 47,166 | (1,518) | (3.2) |
| Average salaried workforce Foreign | 9,298 | 10,689 | (1,391) | (13.0) |
| **Total average salaried workforce(1)** | **54,946** | **57,855** | **(2,909)** | **(5.0)** |
| Non-current assets held for sale (Sofora-Telecom Argentina group) | | 2,581 | (2,581) | (100.0) |
| **Total Average salaried workforce including Non-current assets held for sale(1)** | **54,946** | **60,436** | **(5,490)** | **(9.1)** |

(1) Includes the average employees with temporary work contracts: 2 units in 2017 (1 in Italy and 1 outside Italy). In 2016 average employees with temporary work contracts were 4 units (2 in Italy and 2 outside Italy).

The Group s employees at December 31, 2017 and 2016 were as follows:

| | As of December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (units, except percentages) | | | |
| Employees Italy | 49,689 | 51,125 | (1,436) | (2.8) |
| Employees Foreign | 9,740 | 10,104 | (364) | (3.6) |
| **Total Employees(1)** | **59,429** | **61,229** | **(1,800)** | **(2.9)** |
| **Total Employees including Non-current assets held for sale(1)** | **59,429** | **61,229** | **(1,800)** | **(2.9)** |

(1) Includes employees with temporary work contracts: nil units at December 31, 2017 and 4 units at December 31, 2016.

· **Other operating expenses**

The following table sets forth other operating expenses for the years ended December 31, 2017 and 2016.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | |
| Write-downs and expenses in connection with credit management | 400 | 335 | 65 | 19.4 |
| Provision charges | 228 | 144 | 84 | 58.3 |
| Indirect duties and taxes | 111 | 100 | 11 | 11.0 |
| TLC operating fees | 356 | 373 | (17) | (4.6) |
| Penalties, compensation and administrative sanctions | 33 | 44 | (11) | (25.0) |
| Association dues and fees, donations, scholarships and traineeships | 15 | 18 | (3) | (16.7) |
| Sundry expenses | 65 | 69 | (4) | (5.8) |
| **Total other operating expenses** | **1,208** | **1,083** | **125** | **11.5** |
| *% on Revenues* | *6.1* | *5.7* | | |

Other operating expenses increased by 125 million euros, or 11.5%, from 1,083 million euros in 2016 to 1,208 million euros in 2017. In 2017, the Domestic Business Unit recorded 176 million euros in expenses related to disputes and regulatory penalties and liabilities and expenses related to disputes with former employees and liabilities with customers and/or suppliers. The Brazil Business Unit recorded a decrease of

4 million euros, despite an exchange rate effect of 35 million euros due to lower provisions for risks and lower operating expenses for telecommunications activities. The decrease was driven by lower provision charges and lower contribution fees for telecommunications operations.

· **Depreciation and Amortization**

The following table sets forth depreciation and amortization for the years ended December 31, 2017 and 2016.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | |
| Amortization of intangible assets with a finite useful life | 1,793 | 1,743 | 50 | 2.9 |
| Depreciation of tangible assets owned and leased | 2,680 | 2,548 | 132 | 5.2 |
| **Total depreciation and amortization** | **4,473** | **4,291** | **182** | **4.2** |
| *% on Revenues* | *22.6* | *22.6* | | |

Details are provided in the Note Tangible assets (owned and under finance leases) and Note Intangible assets with a finite useful life of the Notes to the Consolidated Financial Statements, included elsewhere herein.

· **Gains (losses) on disposals of non-current assets**

Gains on disposals of non-current assets decreased by 3 million euros, or 21.4%, from 14 million euros in 2016 to 11 million euros in 2017. The decrease was related to fluctuations in the ordinary asset renewal process.

In 2016, this item was a positive of 14 million euros and included the gain of 44 million reais (approximately 12 million euros at the 2016 average exchange rate) realized by the Brazil Business Unit from the sale of two further tranches of telecommunications towers to American Tower do Brasil.

· **Net impairment losses on non-current assets**

Net impairment losses on non-current assets increased by 34 million euros, from 3 million euros in 2016 to 37 million euros in 2017 and, related primarily to impairment losses on intangible assets.

In preparing the Annual Report for 2017, the TIM Group carried out an impairment test on the goodwill. The results of that testing, carried out in accordance with the specific procedures adopted by the Group, confirmed the amounts of Goodwill allocated to the Group s individual Cash Generating Units.

For further details please see Note-Goodwill of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

v **Operating Profit (loss)**

**Operating profit** decreased by 431 million euros, or 11.6%, from 3,722 million euros in 2016 to 3,291 million euros in 2017. The operating profit margin declined by 3.0 percentage points from 19.6% in 2016 to 16.6% in 2017, as a result of the difference between revenues and other (operating) income and operating expenses described above.

In particular, in 2017 and 2016, the TIM Group recognized certain operating expense and income items that are material in terms of amount and that, by their nature, do not occur continuously in the normal course of operations. They include expenses resulting from corporate restructuring and reorganization processes, expenses resulting from regulatory disputes and penalties and the liabilities related to those expenses, expenses for disputes with former employees, and liabilities with customers and/or suppliers.

In detail:

| | Year ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| | (millions of euros) | |
| **Acquisition of goods and services and Change in inventories** | | |
| Expenses related to agreements and the development of non-recurring projects | **10** | **2** |
| **Employee benefits expenses(*)** | | |
| Expenses related to restructuring and rationalization and other expenses | **697** | **160** |
| **Sundry expenses and provisions** | | |
| Expenses related to disputes and regulatory penalties and liabilities related to those expenses, and expenses related to disputes with former employees and liabilities with customers and/or suppliers | **176** | **36** |
| (Gain)/loss from Brazil Towers disposal(*) | | **(13)** |
| Impairment losses on intangible assets | **30** | |
| **Impact on Operating profit** | **913** | **185** |

(*) The 2016 value of the Brazil Business Unit is stated at constant exchange rates (average 2017 exchange rate). The component of the cost of labor at historical exchange rates amounted to 14 million euros, while the gain realized on the disposal of telecommunication towers amounted to 12 million euros.

Expenses in 2017 mainly included provisions connected with the commencement of the new company restructuring plan for TIM S.p.A., which will unfold over the course of the 2018 2020 Industrial Plan and is designed to support the digitization process by drawing on all measures provided by law. Specifically, the plan will involve, *inter alia*, the application of article 4(1 7) of Law 92 of June 28, 2012 (the Fornero Law ) for executive and non-executive personnel, which provides for early retirement arrangements, as well as the use of measures for economic sustainability.

v **Share Of Profits (Losses) Of Associates And Joint Ventures Accounted For Using The Equity Method**

Shares of losses of associates and joint ventures accounted for using the equity method improved by 22 million euros, from a 23 million euro loss in 2016 to a 1 million euro loss in 2017, primarily as a result of the write-down of the investment held in Alfiere S.p.A.

v **Other Income (Expenses) From Investments**

Income (expenses) from investments changed by 25 million euros, from a 7 million euro income in 2016 to an expense of 18 million euros in 2017, as a result of the allocation of the reserve for exchange differences on translating foreign operations for the investee company Tierra Argentea S.A. to the income statement, the liquidation of which has now been completed.

The 7 million euros income in 2017 was primarily due to dividends distributed by Emittenti Titoli to TIM S.p.A.

v **Finance Income (Expenses), Net**

Net finance expenses increased by 588 million euros, from 907 million euros in 2016 to 1,495 million euros in 2017. The balance recorded in 2017 was affected by the absence of the positive impact of 565 million euros relating to the fair value measurement through profit and loss, performed separately to its liability component, of the embedded option included in the mandatory convertible bond issued by Telecom Italia Finance S.A. at the end of 2013, for 1.3 billion euros and converted in November 2016 ( Guaranteed Subordinated Mandatory Convertible Bonds due 2016 convertible into ordinary shares of TIM S.p.A. ).

For further details about finance income and finance expenses, please see Note Finance income and Finance expenses , of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

v **INCOME TAX EXPENSE**

Income tax expense declined by 390 million euros, from 880 million euros in 2016 to 490 million euros in 2017, mainly as a result of a lower taxable base of the Parent TIM S.p.A., which benefited from tax exemptions and facilities under laws in force.

### 5.2.9 RESULTS OF OPERATIONS OF BUSINESS UNITS FOR THE YEAR ENDED DECEMBER 31, 2017 COMPARED WITH THE YEAR ENDED DECEMBER 31, 2016

v **DOMESTIC**

The following table sets forth, certain financial and other data for the Domestic Business Unit for the years ended December 31, 2017 and 2016.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages and employees) | | | |
| Revenues | 15,354 | 15,006 | 348 | 2.3 |
| Operating profit (loss) | 2,772 | 3,376 | (604) | (17.9) |
| *% of Revenues* | *18.1* | *22.5* | | |
| Employees at year-end (units) | 49,851 | 51,280 | (1,429) | (2.8) |

**Revenues**

Revenues increased by 348 million euros, or 2.3%, from 15,006 million euros in 2016 to 15,354 million euros in 2017, confirming the recovery begun in the previous year.

Revenues from services increased by 122 million euros, or 0.9%, from 13,878 million euros in 2016 to 14,000 million euros in 2017, showing stronger growth relative to total revenues. Revenues from services recorded grew by 2.1% year-on-year in the fourth quarter, posting the strongest performance in over ten years, driven by growth in the customer base of the Mobile and Fixed Broadband segments and the resilience of ARPU levels, buoyed by growth in the penetration of ultrabroadband connectivity services (Fiber and LTE) and digital and ICT services.

In detail:

· **Fixed-line service revenues** remained largely stable compared to 2016 at 9,952 million euros (-0.1%), however, there was improvement in the fourth quarter of 2017, where fixed-line service revenues grew by 1.2% year-on-year. Revenues from traditional voice services declined by 279 million euros relative to 2016 as a result of declining traditional accesses and a reduction in regulated prices for certain wholesale services of 72 million euros. On the other hand, revenues from ICT solutions grew by 56 million euros, or 9% and revenues from innovative data connectivity services grew by 284 million euros, or 15%, driven by a 1.2 million customer growth in the ultrabroadband customer base, which reached a total of 2.1 million customers and 3.1 million including wholesale lines.

· **Mobile services revenues** increased by 75 million euros, or 1.6%, from 4,580 million euros in 2016 to 4,655 million euros in 2017. Growth was driven by the positive competitive performance, which led to growth in the customer base without diluting ARPU levels. The growth observed in the first three quarters was confirmed in the fourth quarter with a 0.5% increase relative to the fourth quarter of 2016, despite the impact of new roaming rules in the European Union.

**Revenues from product sales**, including the change in work in progress, increased by 226 million euros, or 20%, from 1,128 million euros in 2016 to 1,354 million euros in 2017 and reflected an increase in sales of smartphones and connected devices, including smart TVs, Smart Home products, modems, set-top boxes, etc.

The following table sets forth the Domestic Business Unit s revenues by market segment for the years ended December 31, 2017 and 2016.

· **Core Domestic**

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages and employees) | | | |
| Revenues | 14,249 | 13,926 | 323 | 2.3 |
| *Consumer* | 7,737 | *7,389* | *348* | *4.7* |
| *Business* | 4,656 | *4,531* | *125* | *2.8* |
| *Wholesale* | 1,690 | *1,780* | *(90)* | *(5.1)* |
| *Other* | 166 | *226* | *(60)* | *(26.5)* |
| Operating profit (loss) | 2,736 | 3,309 | (573) | *(17.3)* |
| *% of Revenues* | *19.2* | *23.8* | | |
| Employees at year-end (units)(*) | 49,095 | 50,527 | (1,432) | (2.8) |

(*) Includes employees with temporary work contracts: nil unit in 2017, 1 units in 2016.
In detail:

· **Consumer**: revenues for the Consumer segment increased by 348 million euros, or 4.7%, from 7,389 million euros in 2016 to 7,737 million euros in 2017. This performance continued the trend of recovery that began in 2016.

Revenues from services increased by 153 million euros, or 2.3% from 6,794 million euros in 2016 to 6,947 million euros in 2017.

In particular:

revenues for the Mobile segment increased by 134 million euros, or 3.6%, from 3,759 million euros in 2016 to 3,893 million euros in 2017. Revenues from services increased by 105 million euros, or 3.2% relative to 2016, confirming the growth trend observed in previous quarters (+2.9% in the fourth quarter), due to the steady growth in mobile Internet and digital services, which sustained the ARPU levels;

revenues for the Fixed-line segment amounted rose by 225 million euros, or 6.3%, from 3,584 million euros in 2016 to 3,809 million euros in 2017. Revenues from services also confirmed the recovery underway since 2016, driven in particular by growth in the broadband and ultrabroadband customer bases and the overall resilience of ARPU levels.

· **Business**: revenues for the Business segment increased by 125 million euros, or 2.8%, from 4,531 million euros in 2016 to 4,656 million euros in 2017. From 2016 to 2017 the services segment grew by 21 million euros, or 0.5%, and the equipment and products segment grew by 104 million euros, or 22%.

In detail:

· Mobile revenues grew by 1.2% relative to 2016, driven by steady improvement in the services segment, which grew by 4.5% in the fourth quarter. In particular, growth in new digital services, which grew by 13% relative to 2016, offset the continuing decline in traditional services, which decreased by 9% in 2016, mainly as a result of voice services;

· Fixed-line revenues rose by 111 million euros, or 3.2% relative to 2016, driven mainly by the equipment and product segment. Revenues from services remained substantially in line with the 2016, as lower prices and revenues from traditional services (connected with the technological shift towards VoIP systems) were offset by a 9.3% growth in revenues from ICT services.

· **Wholesale**: revenues for the Wholesale segment declined by 90 million euros, or -5.1%, from 1,780 million euros in 2016 to 1,690 million euros in 2017, due to the absence of income from the sale of infrastructure (cable ducts and dark fiber/Backbone) to other operators, which had had a positive impact on revenues for 2016. Growth of 88 million euros in revenues from access and ultrabroadband services in 2017 more than offset by a cut in regulated prices of 72 million euros.

· International Wholesale Telecom Italia Sparkle group

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages and employees) | | | |
| Revenues | 1,349 | 1,351 | (2) | (0.1) |
| Of which third parties | 1,152 | 1,136 | | |
| Operating profit | 37 | 67 | (30) | (44.8) |
| *% of Revenues* | *2.7* | *5.0* | | |
| Employees at year-end (units)(1) | 756 | 753 | 3 | 0.4 |

(1) Includes employees with temporary work contracts: nil units in 2017, 3 units in 2016.

In 2017, revenues for the Telecom Italia Sparkle group International Wholesale were relatively stable declining by 2 million euros, or 0.1%, from 1,351 million euros in 2016 to 1,349 million euros in 2017. In particular, the growth in revenues from voice and mobile services was more than offset the decline in revenues from IP/Data services as a result of the expiry of long-term contracts.

**Other income**

In 2017, other income increased by 212 million euros, from 259 million euros in 2016 to 471 million euros in 2017. This item includes contribution fees resulting from partnership agreements, insurance indemnities and adjustments to estimated liabilities connected with customers and supplier accounts.

**Operating profit**

Operating profit in 2017 decreased by 604 million euros, or 17.9%, from 3,376 million euros in 2016 to 2,772 million euros in 2017, with an Operating profit margin of 18.1%, a decline of 4.4 percentage points from 2016 (22.5% in 2016). In particular, in 2017 Operating profit was negatively impacted by expenses totaling 912 million euros (182 million euros in 2016), relating to corporate restructuring and reorganization expenses, as well as disputes and business transactions, which peaked in the fourth quarter of 2017.

Operating profit was boosted by the positive performance in sales, and consequently in revenues, as well as by the cost optimization plan, which lowered industrial and general operating costs without reducing support for sales drives and service levels. The operating profit was also impacted by the change in the following line items included under operating expenses and shown in the table below.

| | Year ended December 31, | | | |
|---|---|---|---|---|
| | 2017 | 2016 | Changes | |
| | (a) | (b) | (a-b) | % |
| | (millions of euros, except percentages) | | | |
| Acquisition of goods and services | 6,235 | 5,785 | 450 | 7.8 |
| Employee benefits expenses | 3,266 | 2,759 | 507 | 18.4 |
| Other operating expenses | 704 | 574 | 130 | 22.6 |
| Depreciation and amortization | 3,360 | 3,310 | 50 | 1.5 |

In detail:

- **acquisition of goods and services** increased by 450 million euros compared to 2016. In detail:

| | Year ended December 31, 2017 (a) | 2016 (b) | Changes | % |
|---|---|---|---|---|
| | (millions of euros, except percentages) | | | |
| Acquisition of goods | 1,628 | 1,352 | 276 | 20.4 |
| Revenues due to other TLC operators and interconnection costs | 1,614 | 1,554 | 60 | 3.9 |
| Commercial and advertising costs | 751 | 656 | 95 | 14.5 |
| Power, maintenance and outsourced services | 949 | 980 | (31) | (3.2) |
| Rent and leases | 414 | 432 | (18) | (4.2) |
| Other service expenses | 879 | 811 | 68 | 8.4 |
| Total acquisition of goods and services | **6,235** | **5,785** | **450** | **7.8** |
| % of Revenues | 40.6 | 38.6 | | |

- **employee benefits expenses** increased by 507 million euros, or 18.4%, from 2,759 million euros in 2016 to 3,266 million euros in 2017, due to the same factors that impacted employee benefits expenses at the Group level;

- **other operating expenses** increased by 130 million euros, or 22.6%, from 574 million euros in 2016 to 704 million euros in 2017.

The breakdown of the item is reported in the table below:

| | Year ended December 31, 2017 (a) | 2016 (b) | Changes (a-b) | % |
|---|---|---|---|---|
| | (millions of euros, except percentages) | | | |
| Write-downs and expenses in connection with credit management | 313 | 266 | 47 | 17.7 |
| Provision charges | 155 | 51 | 104 | n.s. |
| TLC operating fees and charges | 55 | 54 | 1 | 1.9 |
| Indirect duties and taxes | 91 | 94 | (3) | (3.2) |
| Penalties, settlement compensation and administrative fines | 33 | 44 | (11) | (25.0) |

| | | | | |
|---|---|---|---|---|
| Association dues and fees, donations, scholarships and traineeships | 13 | 16 | (3.0) | (18.8) |
| Sundry expenses | 44 | 49 | (5) | (10.2) |
| **Total** | **704** | **574** | **130** | **22.6** |

· **depreciation and amortization**, increased by 50 million euros, or 1.5%, from 3,310 million euros in 2016 to 3,360 million euros in 2017.

**Employees**

The number of employees was 49,851 as of December 31, 2017, a reduction of 1,429 employees compared to December 31, 2016.

v **BRAZIL**

The following table sets forth certain financial and other data for the Brazil Business Unit for the years ended December 31, 2017 and 2016.

| | Year ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2017 (a) | 2016 (b) | Changes (a-b) | % |
| | (millions of euros, except percentages and employees) | | (millions of Brazilian reais, except percentages and employees) | | | |
| Revenues | 4,502 | 4,047 | 16,234 | 15,617 | 617 | 4.0 |
| Operating profit | 535 | 368 | 1,931 | 1,418 | 513 | 36.2 |
| *% of Revenues* | *11.9* | *9.1* | *11.9* | *9.1* | | |
| Employees at year-end (units) | 9,508 | 9,849 | 9,508 | 9,849 | (341) | (3.5) |

**Revenues**

Revenues increased by 617 million reais, or 4.0%, from 15,617 million reais in 2016 to 16,234 million reais in 2017. Revenues from services increased by 754 million reais, or 5.1%, from 14,720 million reais in 2016 to 15,474 million reais in 2017.

Mobile Average Revenue Per User (ARPU) increased by 12.2% from 18.0 reais for 2016 to 20.2 reais for 2017, due to the general repositioning towards the postpaid segment and new commercial initiatives aimed at increasing data usage and the average spend per customer.

The total number of lines decreased by 4,784 thousand, or 7.5%, from 63,418 thousand in 2016 to 58,634 thousand in 2017, attributable to the prepaid segment, which declined by 7,701 thousand lines and was only partially offset by a 2,918 growth in the postpaid segment, also as a result of the consolidation underway in the market for second SIM cards. Postpaid customers represented 30.4% of the customer base at December 31, 2017, up 6.9 percentage points from 23.5% as of December 31, 2016.

Revenues from product sales declined by 137 million reais, or 15.3%, from 897 million reais in 2016 to 760 million reais in 2017. The decline reflected a change in the sales policy, which is now focused on value rather than increasing sales volumes. The main goals of the new strategy are to increase purchases of new connected devices, giving TIM customers access to broadband services on 3G/4G networks and to support new loyalty offerings for higher-value postpaid customers.

**Operating profit**

Operating profit grew by 513 million reais, or 36.2%, from 1,418 million reais in 2016 to 1,931 million reais in 2017. This result was attributable to both the positive performance of revenues and the benefits delivered by projects to enhance the efficiency of the operating expenses structure, launched in the second half of the previous year, which was partly offset by higher depreciation of 228 million reais relating to the development of industrial infrastructure, and a lower impact of net gains from disposals of assets of 39 million reais, mainly attributable to the sale of telecommunication towers. The last partial sale of telecommunications towers to American Tower do Brasil took place in the second quarter of 2017. This transaction resulted in proceeds and an income effect of an immaterial amount.

With regard to changes in operating costs, the following table sets forth certain expenses for the years ended December 31, 2017 and 2016.

| | Year ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 | Changes | |
| | | | (a) | (b) | (a-b) | % |
| | (millions of euros) | | (millions of Brazilian reais, except percentages) | | | |
| Acquisition of goods and services | 2,168 | 2,028 | 7,816 | 7,826 | (10) | (0.1) |
| Employee benefits expenses | 353 | 336 | 1,274 | 1,296 | (22) | (1.7) |
| Other operating expenses | 500 | 505 | 1,805 | 1,948 | (143) | (7.3) |
| Change in inventories | 6 | (1) | 20 | (2) | 22 | |
| Depreciation and amortization | 1,114 | 980 | 4,013 | 3,785 | 228 | 6.0 |

- **acquisition of goods and services** decreased by 10 million reais, or 0.1%, from 7,826 million reais in 2016 to 7,816 million reais in 2017;

- **employee benefits expenses**, decreased by 22 million reais, or 1.7%, from 1,296 million reais in 2016 to 1,274 million reais in 2017. In particular, employee benefits expenses in 2016 included other net costs for termination benefits of 56 million reais;

- **other operating expenses** decreased by 143 million reais, or 7.3%, from 1,948 million reais in 2016 to 1,805 million reais in 2017;

- **depreciation and amortization** increased by 228 million reais, or 6.0%, from 3,785 million reais in 2016 to 4,013 million reais in 2017.

**Employees**

Employees were 9,508 units at December 31, 2017, a decrease of 341 units compared to December 31, 2016 (9,849 units).

* * *

For further details on the agreement for the sale of telecommunication towers in Brazil, please see Item 4. Information on the TIM Group 4.2 Business Units 4.2.2 Brazil.

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## 5.3 LIQUIDITY AND CAPITAL RESOURCES

The TIM Group s policy is to manage financial risks (market risk, credit risk and liquidity risk) by defining, at a central level, guidelines for directing operations, identifying the most appropriate financial instruments to meet pre-determined objectives, monitoring the results achieved and excluding the use of financial instruments for speculative purposes.

TIM has a centralized Finance Department which operates in the interests of the entire Group:

- allocating liquidity where necessary;
- obtaining excess cash resources from the Group companies;
- guaranteeing an adequate level of liquidity compatible with individual needs;
- supporting its subsidiaries to gain access to the loan market; and
- providing financial consulting services to its subsidiaries.

These activities reduce the Group companies need to seek bank lines and enable those companies to obtain better conditions from the banking system by constantly monitoring cash flows and ensuring a more efficient use of liquidity in excess of requirements.

Furthermore, the TIM Group has a centralized financial risk management policy for market, credit and liquidity risks. For additional details on funding and treasury policies and risk policies reference should be made to the Note Financial Assets (non-current and current) and Note Financial risk management of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The TIM Group s goal is to achieve an adequate level of financial flexibility which is expressed by maintaining a treasury margin (composed by cash and cash equivalents, marketable securities and undrawn committed credit lines) to cover refinancing requirements at least for the next 12-18 months.

### 5.3.1 LIQUIDITY

TIM Group s primary source of liquidity is cash generated from operations and its principal use of funds are the payment of operating expenses, capital expenditures and investments, the servicing of debt and the payment of dividends to shareholders.

For additional details, reference should be made to the Note Financial Assets (non-current and current) of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

The table below summarizes, for the periods indicated, the TIM Group s cash flows.

| | | Year ended December 31, 2018 (a) | 2017 (b) | 2016 (c) | Changes (a-b) | (b-c) |
|---|---|---|---|---|---|---|
| | | (millions of euros) | | | | |
| **Cash flows from (used in) operating activities** | **(a)** | **4,592** | **5,399** | **5,706** | **(807)** | **(307)** |
| Profit (loss) from continuing operations | | (1,152) | 1,287 | 1,919 | (2,439) | (632) |
| *Adjustment for:* | | | | | | |
| Depreciation and amortization | | 4,255 | 4,473 | 4,291 | (218) | 182 |
| Impairment losses (reversals) on non-current assets (including investments) | | 2,589 | 50 | 6 | 2,539 | 44 |
| Net change in deferred tax assets and liabilities | | (195) | (147) | 38 | (48) | (185) |
| Losses (gains) realized on disposals of non-current assets (including investments) | | 1 | (11) | (15) | 12 | 4 |
| Share of losses (profits) of associates and joint ventures accounted for using the equity method | | 1 | 1 | 23 | | (22) |
| Change in provisions for employee benefits | | (208) | 437 | (131) | (645) | 568 |
| Change in inventories | | (99) | (30) | (10) | (69) | (20) |
| Change in trade receivables and net amounts due from customers on construction contracts | | (49) | 379 | (310) | (428) | 689 |
| Change in trade payables | | (163) | (605) | 229 | 442 | (834) |
| Net change in current income tax receivables/payables | | (210) | (515) | 581 | 305 | (1,096) |
| Net change in miscellaneous receivables/payables and other assets/liabilities | | (178) | 80 | (915) | (258) | 995 |
| **Cash flows from (used in) investing activities** | **(b)** | **(4,314)** | **(4,740)** | **(3,964)** | **426** | **(776)** |
| Purchase of intangible assets | | (3,647) | (2,292) | (1,641) | (1,355) | (651) |
| Purchase of tangible assets | | (2,831) | (3,477) | (3,467) | 646 | (10) |
| Total purchase of intangible and tangible assets on an accrual basis | | (6,478) | (5,769) | (5,108) | (709) | (661) |
| Change in amounts due for purchases of intangible and tangible assets | | 1,947 | 455 | 450 | 1,492 | 5 |
| **Total purchase of intangible and tangible assets on a cash basis** | | (4,531) | (5,314) | (4,658) | 783 | (656) |
| Capital grants received | | 108 | 82 | | 26 | 82 |
| Acquisition of control of companies or other businesses, net of cash acquired | | | | (10) | | 10 |
| Acquisitions/disposals of other investments | | (3) | (4) | (5) | 1 | 1 |
| Change in financial receivables and other financial assets (excluding hedging and non-hedging derivatives | | 96 | 466 | 175 | (370) | 291 |

| | | | | | |
|---|---|---|---|---|---|
| under financial assets) | | | | | |
| Proceeds from sale that result in a loss of control of subsidiaries or other businesses, net of cash disposed of | | | 492 | | (492) |
| Proceeds from sale/repayments of intangible, tangible and other non-current assets | 16 | 30 | 42 | (14) | (12) |

| | | Year ended December 31, | | | Changes | |
|---|---|---|---|---|---|---|
| | | 2018 | 2017 | 2016 | | |
| | | (a) | (b) | (c) | (a-b) | (b-c) |
| | | (millions of euros) | | | | |
| **Cash flows from (used in) financing activities** | **(c)** | **(1,830)** | **(1,210)** | **(1,263)** | **(620)** | **53** |
| Change in current financial liabilities and other | | 394 | (1,188) | (437) | 1,582 | (751) |
| Proceeds from non-current financial liabilities (including current portion) | | 2,546 | 2,630 | 3,561 | (84) | (931) |
| Repayments of non-current financial liabilities (including current portion) | | (4,426) | (3,426) | (4,164) | (1,000) | 738 |
| Changes in hedging and non-hedging derivatives | | (110) | 997 | | (1,107) | 997 |
| Share capital proceeds/reimbursements (including subsidiaries) | | 22 | 16 | 4 | 6 | 12 |
| Dividends paid | | (256) | (235) | (227) | (21) | (8) |
| Changes in ownership interests in consolidated subsidiaries | | | (4) | | 4 | (4) |
| **Cash flows from (used in) Discontinued operations/Non-current assets held for sale** | **(d)** | | | **(45)** | | **45** |
| **Aggregate cash flows** | **(e=a+b+c+d)** | **(1,552)** | **(551)** | **434** | **(1,001)** | **(985)** |
| **Net cash and cash equivalents at beginning of the year:** | **(f)** | **3,246** | **3,952** | **3,216** | **(706)** | **736** |
| Net foreign exchange differences on net cash and cash equivalents | (g) | (63) | (155) | 302 | 92 | (457) |
| **Net cash and cash equivalents at end of the year:** | **(h=e+f+g)** | **1,631** | **3,246** | **3,952** | **(1,615)** | **(706)** |

For further details please see the Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016 of the Consolidated Financial Statements included elsewhere in this Annual Report.

### 5.3.2 Capital Resources

***Net Financial Debt***

Net Financial Debt is a non-GAAP financial measure as defined in Item 10(e) of Regulation S-K under the 1934 Act. For further details please see 5.2.3 Non-GAAP Financial Measures .

On a consolidated basis, Net Financial Debt was 25,995 million euros at December 31, 2018, compared to 26,091 million euros at December 31, 2017 and to 25,955 million euros at December 31, 2016.

In our 2019-2021 Strategic Plan, we reaffirmed our commitment to maintaining strong financial discipline as a strategic priority. We expect the Group s Net Financial Debt to benefit, among other things, from planned efforts to increase efficiency.

Please see Introduction Cautionary Statement for Purposes of the Safe Harbor Provisions of the United States Private Securities Litigation Reform Act of 1995 , included elsewhere in this Annual Report, for a discussion of factors which could cause our actual results to differ materially from the target discussed above. See, also, Item 3. Key Information 3.1 Risk Factors .

*There can be no assurance that we will be able to achieve the financial targets we have established.*

Net Financial Debt as of December 31, 2018, 2017 and 2016 is set forth in the following table.

| | As of December 31, | | |
|---|---|---|---|
| | **2018** | **2017** | **2016** |
| | (millions of euros) | | |
| Non-current financial liabilities | 25,059 | 28,108 | 30,469 |
| Current financial liabilities | 5,913 | 4,756 | 4,056 |
| Financial liabilities directly associated with Discontinued operations/Non-current assets held for sale | | | |
| **Gross financial debt (A)** | **30,972** | **32,864** | **34,525** |
| **Non-current financial assets (B)** | **(1,594)** | **(1,768)** | **(2,698)** |
| **Current financial asset:** | | | |
| Securities other than investments | (1,126) | (993) | (1,519) |
| Financial receivables and other current financial assets | (340) | (437) | (389) |
| Cash and cash equivalents | (1,917) | (3,575) | (3,964) |
| **Total current financial assets (C)** | **(3,383)** | **(5,005)** | **(5,872)** |
| **Financial assets relating to Discontinued operations/Non-current assets held for sale (D)** | | | |
| **Financial assets (E=B+C+D)** | **(4,977)** | **(6,773)** | **(8,570)** |
| **Net financial debt (A+E)** | **25,995** | **26,091** | **25,955** |

The non-current portion of gross financial debt was 25,059 million euros at December 31, 2018, 28,108 million euros at December 31, 2017 and 30,469 million euros at December 31, 2016, and corresponds to 80.9% of total gross financial debt.

The TIM Group financial risk management policies aim to diversify market risks, hedging exchange rate risk in full and optimizing interest rate exposure through an appropriate diversification of the portfolio, which is also achieved through the use of carefully selected derivative financial instruments. Such instruments are not used for speculative purposes and all have an underlying, which is hedged.

Furthermore, in order to determine its exposure to interest rates, the Group defines an optimum composition for the fixed-rate and variable-rate debt structure and uses derivative financial instruments to achieve that prefixed composition. Taking into account the Group s operating activities, the optimum mix of medium/long-term non-current financial liabilities has been established, on the basis of the nominal amount, in a range of 65%-75% for the fixed-rate component and 25%-35% for the floating-rate component.

In managing market risks, the Group has adopted the Guidelines for the Management and control of financial risk and mainly uses Interest Rate Swaps (IRS) and Cross Currency Interest Rate Swaps (CCIRS). For further details, please see Note Financial risk management, included elsewhere in this Annual Report.

**CHANGE IN NET FINANCIAL DEBT DURING 2018**

The following table summarizes the main transactions which had an impact on the change in net financial debt during 2018:

| | (millions of euros) |
|---|---|
| **Net financial debt as of December 31, 2017** | **26,091** |
| Capital expenditures | 6,408 |
| Increase in finance leasing contracts | 70 |
| Dividends paid | 256 |
| Financial investments | 6 |
| Share capital increases/decreases | (22) |
| Disposal of investments and other divestitures | (18) |
| Cash flows from operating activities, net of other uses (sources) | (6,796) |
| **Net change in 2018** | (96) |
| **Net financial debt as of December 31, 2018** | **25,995** |

In particular:

· **Capital expenditures on an accrual basis** were 6,408 million euros in 2018. The breakdown is as follows:

| | Year ended December 31, | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2018 | % of total | 2018 comparable (a) | % of total | 2017 (b) | % of total | Changes (a-b) |
| | (millions of euros, except percentages) | | | | | | |
| Domestic | 5,518 | 86.1 | 5,634 | 85.9 | 4,551 | 79.8 | 1,083 |
| Brazil | 890 | 13.9 | 924 | 14.1 | 1,150 | 20.2 | (226) |
| Other activities | | | | | | | |
| *Adjustments* | | | | | | | |
| **Total consolidated capital expenditures** | **6,408** | **100.0** | **6,558** | **100.0** | **5,701** | **100.0** | **857** |
| *% on revenues* | *33.8* | | *34.3* | | *28.8* | | |

With the introduction of IFRS 15, Mobile customer acquisition costs, relating to contracts with minimum-duration lock-in clauses, are no longer capitalized and depreciated. Instead they are classified as deferred contract costs and subsequently recognized in the income statement over the term of the contract.

On the same accounting basis, capital expenditures in 2018 totaled 6,558 million euros (5,701 million euros in 2017). In particular:

- the **Domestic Business Unit** reported expenditures equal to 5,634 million euros (4,551 million euros in 2017). Net of the acquisition of rights to use 5G frequencies (2,399 million euros) at the end of 2018 and the renewal of the GSM license in 2017 (630 million euros), capital expenditures were down by 686 million euros, mainly attributable to the coverage levels of fixed and mobile networks already achieved;

- the **Brazil Business Unit** posted 924 million euros of capital expenditures in 2018, 226 million euros less than for 2017. Without the impact of fluctuations in exchange rates (-187 million euros), the change was a negative 39 million euros. Capital expenditures of the Business Unit were targeted primarily at strengthening mobile ultra-broadband network infrastructure and developing the fixed broadband business of TIM Live.

- Increase in finance leasing contracts. In 2018, this item was equal to 70 million euros (68 million euros in 2017) and mainly refers to the higher value of finance lease assets and related higher financial payables recognized mainly following the recognition of vehicle lease agreements as finance leases, in accordance with IAS 17, by the Domestic Business Unit.

- **Disposal of investments and other divestitures.** This item shows a positive figure of 18 million euros and mainly refers to disposals of assets within the normal operating cycle.

In 2017, the item posted a positive balance of 33 million euros, mainly reflecting the disposal of 17 million euros of tangible assets and the collection of a deferred 13 million euros of the sale price of a non-controlling interest sold in previous years.

- **Share capital increases/reimbursements, including incidental costs.** These totaled 22 million euros in 2018 and essentially consisted of contributions from an external shareholder of the Group for new capital issued by a subsidiary (16 million euros in 2017).

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The following should also be taken into account with respect to net financial debt:

- Sales of receivables to factoring companies

Sales without recourse of trade receivables to factoring companies completed during 2018 resulted in a positive effect on net financial debt at December 31, 2018 of 2,004 million euros (2,000 million euros at December 31, 2017).

### Change In Net Financial Debt During 2017

The following table summarizes the main transactions which had an impact on the change in net financial debt during 2017:

| | **(millions of euros)** |
|---|---|
| **Net financial debt as of December 31, 2016** | **25,955** |
| Capital expenditures | 5,701 |
| Change in finance lease contracts | 68 |
| Dividends paid | 235 |
| Financial investments | 12 |
| Share capital increases/decreases | (16) |
| Disposal of investments and other divestitures | (33) |
| Cash flows from operating activities, net of other uses (sources) | (5,831) |
| **Net change in 2017** | **136** |
| **Net financial debt as of December 31, 2017** | **26,091** |

In particular:

· **Capital expenditures on an accrual basis** were 5,701 million euros in 2017, an increase of 825 million euros compared to 2016. The breakdown is as follows:

| | Year ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2017 | | 2016 | | Changes |
| | (a) | % of total | (b) | % of total | (a-b) |
| | (millions of euros, except percentages) | | | | |
| Domestic | 4,551 | 79.8 | 3,709 | 76.1 | 842 |
| Brazil | 1,150 | 20.2 | 1,167 | 23.9 | (17) |
| Other activities | | 0.0 | | 0.0 | |
| *Adjustments* | | | | | |
| **Total consolidated capital expenditures** | **5,701** | **100.0** | **4,876** | **100.0** | **825** |
| *% on revenues* | *28.8* | | *25.6* | | |

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- the **Domestic Business Unit** posted capital expenditures of 4,551 million euros, an increase of 842 million euros compared to 2016. Higher capital expenditure was driven by an expense of 630 million euros to renew GSM frequency user rights and the fast-tracking of innovation expenditure for infrastructure development. This expense was 395 million euros in 2016. In particular, expenditure on network development and next-generation services accounted for 63% of total network expenditure in 2017, a 6.3 percentage point increase compared to 2016. The decrease in other types of expenditure continued thanks to the selectivity and attention given to capital allocation choices based on strategic priorities and profit optimization;

- the Brazil Business Unit posted capital expenditures in 2017 of 1,150 million euros, a decrease of 17 million euros on 2016. Without the impact of fluctuations in exchange rates, which amounted to 82 million euros, the change was a decline of 99 million euros and mainly reflected lower expenditure for renewals of TLC licenses by 52 million euros and for developments in Information Technology projects by 47 million euros, following the strong growth recorded in 2016 due to the launch of new commercial offers and the introduction of the new billing system. Capital expenditure in network infrastructure in 2017 amounted to 806 million euros, a 3 million euro decline at constant exchange rates compared to 2016), and was mainly aimed at developing the 4G mobile broadband network, reaching 3,003 towns, an increase of 1,748 towns in 2017, with an urban population coverage rate of 91.2%.

- **Change in finance lease contracts**. In 2017, the item totaled 68 million euros, of which 54 million euros referred to the Parent and 14 million euros to the Brazil Business Unit. The total amount referred to the closure of projects recognized under the item in the previous year.

In 2016, the item amounted to 232 million euros and essentially referred to contractual renegotiations by TIM S.p.A. within the real estate transformation project, new rental agreements for industrial vehicles, and a finance lease entered into by the Tim Brasil group on telecommunication towers.

- Financial **investments.** In 2017, the item amounted to 12 million euros and included 4 million euros in subscriptions of new units issued by the Northgate Fund.

In 2016 this item amounted to 15 million euros and mainly consisted of the following:

  - 6 million euros for the payment made by INWIT S.p.A., net of the cash acquired, for the acquisition of the investments in Revi Immobili S.r.l., Gestione Immobili S.r.l. and Gestione Due S.r.l.; such companies were subsequently merged with and into INWIT;

  - 5 million euros for the subscription of units in the company Northgate Telecom Innovations Partners L.P. Fund;

  -

4 million euros for the payment, net of the cash acquired, for the acquisition of the investment in Noverca S.r.l.

- Disposal **of investments and other divestitures**. The item posted a positive balance of 33 million euros for 2017 and mainly reflected the sale of non-current assets during the normal operating cycle, for 17 million euros, and the collection of a deferred portion of the price of a non-controlling interest sold in previous years, in the amount of 13 million euros.

In 2016, the item posted a positive figure of 745 million euros and principally relates to:

  - the sale of the Sofora Telecom Argentina group for 704 million euros, 545 million euros representing the price and 159 million euros for the deconsolidation of the related net financial debt, with the remaining amount relating to disposals of assets as part of normal operations;

  - the proceeds of 134 million reais (corresponding to approximately 35 million euros) realized by the Brazil Business Unit in 2016 from the sale of telecommunications towers.

- **Share capital increases/reimbursements, including incidental costs.** These totaled 16 million euros in 2017 and essentially consisted of contributions from an external shareholder of the Group for new capital issued by a subsidiary.

In 2016, the item amounted to 1,304 million euros and included the effect of the conversion of the Mandatory Convertible Bond into TIM shares for 1,300 million euros of November 2016.

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The following should also be taken into account with respect to net financial debt:

· **Sales of receivables to factoring companies**

Sales of trade receivables to factoring companies finalized in 2017 resulted in a positive effect on net financial debt at December 31, 2017 of 2,000 million euros compared to 1,091 million euros at December 31, 2016. The increase results from the realization of new revolving securitization programs (handset, modem and mobile billed) and from the identification of a greater volume of sales of receivables.

**Gross Financial Debt**

At December 31, 2018, on a consolidated basis, our gross financial debt amounted to 30,972 million euros, compared to 32,864 million euros at December 31, 2017, and included non-current financial liabilities (long-term debt) of 25,059 million euros, compared to 28,108 million euros at December 31, 2017 and current financial liabilities (short-term debt) of 5,913 million euros, compared to 4,756 million euros at December 31, 2017.

As of December 31, 2017, approximately 74.8% of our gross financial debt was denominated in Euro, while the remainder was primarily denominated in U.S. Dollars, Pound Sterling and Brazilian Reais.

The following table sets out the currency composition of our gross financial debt:

| | As of December 31, 2018 | | As of December 31, 2017 | |
|---|---|---|---|---|
| | (millions of foreign currency) | (millions of euros) | (millions of foreign currency) | (millions of euros) |
| USD | 6,450 | 5,633 | 7,168 | 5,977 |
| GBP | 1,267 | 1,416 | 1,266 | 1,427 |
| BRL | 2,609 | 588 | 5,863 | 1,478 |
| JPY | 20,033 | 159 | 20,031 | 148 |
| EURO | | 23,176 | | 23,834 |
| **Total gross financial debt** | | **30,972** | | **32,864** |

For information regarding the split of our debt between fixed rate and floating rate please see Note Financial risk management of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report.

Long-term debt includes notes we have issued in order to reduce our dependence on short-term debt, extend the average life of our financial debt and expand our investor base. For this purpose, we have issued long-term debt in the capital markets under, among others:

**Active programs:**

- the TIM Euro Medium Term Note ( **EMTN** ) Programme. The maximum amount permitted to be issued under the Programme, including multiple tranches and multiple currencies, is 20 billion euros. This is the Group s only active debt program although it can issue debt instruments on an ad hoc basis if needed.

**Inactive programs:**

- the **Shelf Registration Statement**, which expired on December 29, 2011, for the issuance, by TIM S.p.A. s wholly-owned subsidiary Telecom Italia Capital S.A. and under a guarantee by TIM S.p.A., of an indeterminate amount of debt securities at various terms, rates and maturities;
- the **Olivetti Euro Medium Term Note Programme**, for the issuance of a total amount of 15 billion euros in debt (or the equivalent in other currencies), at various terms, rates and maturities; and
- the Old Telecom Italia Global Medium Term Note Program ( **Global Note Program** ), for the issuance of a total amount of U.S.$12 billion in debt (or the equivalent in other currencies), at various terms, rates and maturities.

The following table highlights the utilization of the above mentioned EMTN Programme at the end of 2018.

| | | As of December 31, 2018 EMTN Programme (millions of euros) |
|---|---|---|
| **Total amount of the program (max outstanding notes)** | (A) | **20,000.00** |
| Notes and bonds issued | | 31,552.79 |
| Notes and bonds repaid | | (18,504.43) |
| **Net utilization of the program** | (B) | **13,048.36** |
| **Remaining available amount of the program** | (A-B) | **6,951.64** |

***Notes and bonds***

At December 31, 2018 we had notes and bonds outstanding amounting to 21,497 million euros, compared to 22,202 million euros at December 31, 2017. The nominal repayment amount at December 31, 2018 was 21,021 million euros, a decrease of 754 million euros compared to 21,775 million euros at December 31, 2017.

Changes in bonds during 2018 were as follows:

| | Currency | Amount (millions) | Issue date |
|---|---|---|---|
| **NEW ISSUES** | | | |
| Telecom Italia S.p.A. 750 million euros 2.875% maturing 28/01/2026 | Euro | 750 | 28/06/18 |

| | Currency | Amount (millions) | Repayment date |
|---|---|---|---|
| **REPAYMENTS** | | | |
| Telecom Italia S.p.A. 593 million euros 4.750%(1) | Euro | 593 | 05/25/18 |
| Telecom Italia S.p.A. 677 million US dollars 6.999%(2) | USD | 677 | 06/04/18 |
| Telecom Italia S.p.A. 582 million euros 6.125%(3) | Euro | 582 | 12/14/2018 |

(1) Net of buy-backs totaling 157 million euros made by the company in 2015.

(2) Net of the securities bought back by TIM S.p.A. (323 million USD) on July 20, 2015.

(3) Net of buy-backs totaling 168 million euros made by the company in 2015.
With reference to Telecom Italia S.p.A. 2002 2022 bonds, reserved for subscription by employees of the Group, the nominal amount at December 31, 2018 was 203 million euros, down by 1 million euros compared to December 31, 2017 (204 million euros).

On January 11, 2019, TIM S.p.A. issued a bond for 1,250 million euros, maturing on April 11, 2024, with coupon equal to 4.000%, issue price 99.436%, repayment price 100%. The issue is part of the maturing debt optimization and refunding process.

For further details about the outstanding notes and bonds as of December 31, 2018 please see also Note Financial liabilities (non-current and current) of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

***Revolving Credit Facility and Term Loan***

The following table shows the composition and the drawdown of the committed credit lines available at December 31, 2018.

| | As of December 31, 2018 | | As of December 31, 2017 | |
|---|---|---|---|---|
| | Committed | Drawdown | Committed | Drawdown |
| | (billions of euros) | | | |
| Revolving Credit Facility expiring May 2019 | | | 4.00 | |
| Revolving Credit Facility expiring March 2020 | | | 3.00 | |
| Revolving Credit Facility expiring January 2023 | 5.00 | | | |
| **Total** | **5.00** | | **7.00** | |

On January 16, 2018, two syndicated Revolving Credit Facilities existing at December 31, 2017 were closed in advance and replaced by a new syndicated Revolving Credit Facility for a total of 5 billion euros, maturing on January 16, 2023, currently not drawn.

At December 31, 2018, TIM had bilateral Term Loans for 1,475 million euros and overdraft facilities for 250 million euros, drawn down for the full amount.

***Maturities of financial liabilities and average cost of debt***

The average maturity of non-current financial liabilities (including the current portion of medium/long-term financial liabilities due within 12 months) was 7.62 years.

The average cost of the Group s debt, considered as the cost for the year calculated on an annual basis and resulting from the ratio of debt-related expenses to average exposure, stood at approximately 4.4%.

For details on the maturities of financial liabilities in terms of expected nominal repayment amounts, as contractually agreed, see the Notes Financial liabilities (non-current and current) in the Consolidated Financial Statements at December 31, 2018 of the TIM Group.

***Current financial assets and liquidity margin***

The TIM Group s available liquidity margin amounted to 8,043 million euros, equal to the sum of:

Cash and cash equivalents and Current securities other than investments totaling 3,043 million euros (4,568 million euros at December 31, 2017), also included 545 million euros of repurchase agreements, of which 450 million euros maturing in January 2019 and the remaining portion maturing in March 2019;

the new Revolving Credit Facility opened in January 2018 for 5,000 million euros.
This margin is sufficient to cover Group financial liabilities falling due over the next 24 36 months.

In particular:

- **Cash and cash equivalents** amounted to 1,917 million euros (3,575 million euros at December 31, 2017). The different technical forms of investing available cash can be analyzed as follows:
  - Maturities: investments have a maximum maturity of three months;
  - Counterparty risk: investments by the European companies are made with leading banking, financial and industrial institutions with high credit quality. Investments by the companies in South America are made with leading local counterparties;
  - Country risk: deposits have been made mainly in major European financial markets.

**Current securities other than investments** amounted to 1,126 million euros (993 million euros at December 31, 2017): These forms of investment represent alternatives to the investment of liquidity with the aim of improving returns. They included a total of 558 million euros of Italian treasury bonds purchased by TIM S.p.A. (252 million euros), Telecom Italia Finance S.A. (296 million euros) and Inwit S.p.A. (10 million euros), as well as 387 million euros of bonds purchased by Telecom Italia Finance S.A. with different maturities, all with an active market and consequently readily convertible into cash, and 181 million euros of investments in monetary funds by the Brazil Business Unit. The purchases of the above government bonds, which, pursuant to Consob Communication no. DEM/11070007 of August 5, 2011, represent investments in Sovereign debt securities , have been made in accordance with the Guidelines for the Management and control of financial risk adopted by the TIM Group since August 2012.

For further details please see Note Financial Risk Management of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report.

***Treasury policies***

The Group uses a variety of instruments to finance its operations and raise liquidity, in particular bond issues, alongside committed and uncommitted bank lines.

***Off-Balance Sheet Arrangements***

Guarantees, net of back-to-back guarantees received, amounted to 33 million euros.

The guarantees provided by third parties to Group companies, amounting to 6,979 million euros, refer to guarantee financing from banks and other financial institutions consisting of guarantees for loans received (1,255 million euros) and of performance guarantees under outstanding contracts (5,724 million euros).

In particular:

- The TIM Group issued six guarantees to the Ministry of Economic Development for a total of 1,922 million euros for the deferment of the payment of the amount due for the acquisition of the user rights to frequencies in the 694-790 MHz, 3600-3800 MHz and 26.5-27.5 GHz bands, which will be reserved for 5G mobile telecommunications services.

- The insurance guarantees, which totaled 739 million euros, basically refer to guarantee financing by the TIM Group in applying legal provisions for contracts of Public Administrations and similar bodies.

In May 2018, as mentioned above, TIM issued a surety to the Prime Minister s Office for 74.3 million euros to secure an appeal to the Lazio Administration Court for a provisional stay of the administrative fine levied on TIM following the preliminary investigation connected with the penalty proceeding initiated under Article 2 of Decree Law 21 of March 15, 2012 (the Golden Power rule ).

For further details please see Note Contingent liabilities, other information, commitments and guarantees of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

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***Contractual Obligations and Commitments***

The following table aggregates our contractual obligations and commitments with definitive payment terms which will require significant cash outlays in the future based on nominal amounts.

As of December 31, 2018, the **nominal repayment amounts of payables** and the relating expiration dates were as follows:

| | Amounts due as of December 31, | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2019** | **2020** | **2021** | **2022** | **2023** | **After 2023** | **Total** |
| | (millions of euros) | | | | | | |
| Bonds | 2,446 | 1,267 | 564 | 3,087 | 2,419 | 11,238 | 21,021 |
| Amounts due to banks, other financial payables and liabilities | 1,293 | 384 | 1,343 | 819 | 331 | 221 | 4,391 |
| Finance lease liabilities | 190 | 181 | 172 | 132 | 130 | 1,124 | 1,929 |
| **Total** | **3,929** | **1,832** | **2,079** | **4,038** | **2,880** | **12,583** | **27,341** |
| Current financial liabilities | 1,308 | | | | | | 1,308 |
| **Total** | **5,237** | **1,832** | **2,079** | **4,038** | **2,880** | **12,583** | **28,649** |

For further details please see also Note Derivatives and Note Other information, Operating leases of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

### 5.3.3 Capital Expenditures

The table below sets forth, for the periods indicated, our total capital expenditures (on an accrual basis) allocated to the Business Units.

| | Year ended December 31, | | |
|---|---|---|---|
| | **2018** | **2017** | **2016** |
| | (millions of euros) | | |
| Capital expenditures on tangible assets: | | | |
| Domestic | 2,133 | 2,788 | 2,596 |
| Brazil | 628 | 621 | 639 |
| Adjustments and eliminations | | | |
| **Total capital expenditures on tangible assets(1)** | **2,761** | **3,409** | **3,235** |
| **Capital expenditures on intangible assets(2)** | **3,647** | **2,292** | **1,641** |

| | | | |
|---|---|---|---|
| **Total capital expenditures(3)** | **6,408** | **5,701** | **4,876** |

(1) Capital expenditures on tangible assets are mainly related to local and long distance networks, exchange equipment, investments in subscribers equipment, radio and transmission equipment.

(2) Capital expenditures on intangible assets include expenditures for software for telecommunications systems and licenses.

(3) Intercompany capital expenditures are adjusted to eliminate intercompany profit.

The capital expenditures planned for the 2019-2021 period at the TIM Group level in Italy and in Brazil are:

· approximately 3 billion euros in Italy per year;

· approximately 12.5 billion reais, in Brazil.

* * *

For details about market risk disclosures please see Item 11. Quantitative And Qualitative Disclosures About Market Risks.

## 5.4 RESEARCH AND DEVELOPMENT

### Research and Development in Italy

### Approach to innovation, choice of topics, innovation governance process

Innovation understood as a research and development activity for innovative technologies and services, processes and business models represents a key factor in the company s ability to keep up with the profound transformations brought about through ICT, as well as a necessary asset acting as a driving force in this evolution in terms of its customers and the national system, helping to overcome the socio-cultural barriers that limit the opportunity to participate in the information society and enjoyment of the relative benefits.

TIM has always considered innovation to be a strategic asset and takes great care in governing individual aspects, from its strategic role to its responsibility, objectives and policy.

Both technological and business-based innovation are considered in 2018 as central elements to the response to change in the technological, market and competitive context. In line with this, the Group has acted in several ways:

· by continuing the action underway since 2016, to strengthen internal innovation lines, focusing laboratory activities and research groups on key aspects of the development of the fixed and mobile network towards future 5G standards and ultrabroadband, and issues concerning service platforms and new operations systems;

· by confirming the drive towards the Open Innovation principle with the aim of maximizing the benefits deriving from the integration of innovative contributions generated internally with external sources of innovative ideas;

· by interacting with the start-up world in order to catalyze their start-up capacity for innovation through the TIM #Wcap acceleration program; and

· by implementing initiatives which allow for the growth of co-creation ecosystems like the IoT Open Lab, a laboratory dedicated to the development of IoT solutions based on key technologies for the Telco Operator with a view to open innovation.

More specifically, innovation management is overseen, with different missions, by the Technology Architectures & Innovation Department and by engineers, but involves various internal and external stakeholders of the company:

· other areas of the company involved from time to time, both as internal customers for the innovation output solution and as centers of expertise on the topic;

- traditional and digital partners, for the joint go2market of digital services;

- research centers and universities, for cooperation and joint projects. In 2018, 18 research contracts came into effect, for a total value of 840,000 euros;

- Standardization Bodies and Associations: TIM remains very active within the main Standardization Bodies and Associations, with 27 memberships in 2018, for a cost of 900,000 euros. On a national, but above all international, level there is a broad circle made up of standardization bodies (ETSI, ITU, CENELEC and 3GPP among others), associations (GSMA and NGMN to name the major ones), alliances (oneM2m and BBF), and telco open communities (ONF, OPNFV and CORD), which play a fundamental role in the evolution of the TLC industry for networks, platforms and services;

- Ministries (Ministry of Economic Development and Ministry of Education, Universities and Research), the European Union and public authorities (CNR and local authorities) for projects funded through participation in competitive tenders, and partnership initiatives. In particular, two specific consortiums were set up in 2018: KIC U-Move, the Community for Knowledge and Innovation in urban mobility, promoted by the European Institute of Innovation and Technology (EIT), with the support of the EU, in order to promote urban mobility, and Competence Industry Manufacturing 4.0 (CIM 4.0), set up in December 2018 after the award of the Ministry of Economic Development Industry 4.0 contract, to help fast track the process to transform a considerable section of the production system at local and national level, and act as an integrated hub for the dissemination of expertise and good practices, offering training and on-site experience, in technological and industrial sectors in Piedmont and other Italian regions. The Ministry of Economic Development will fund the consortium projects over the next three years.

TIM s technological evolution is based on CTO Technology Strategy, which identifies technology strategy in terms of guidelines, specific technologies and roadmaps to adopt in the long term. The three-year technological plan is the reference policy for the Group and includes the technological evolution plans of subsidiaries. The plan sets out the main external factors that may affect company strategies (regulation, standards, suppliers, other market operators) and establishes the company entities involved, the applicable technological architecture and evolution of specific technologies, along with relative roadmaps for deployment or assessment. The qualitative and quantitative long term goals have been given an annual framework. They are defined so that they can be objectively measured in compliance with quality standards (ISO 9001) and environmental standards (ISO 14001), and operational innovation processes, in the same way as TIM processes, in general, are based on TMF s reference standard E-Tom.

Overall, in 2018 TIM committed around 1,300 people to working on technological innovation and engineering in Italy, for an overall investment, for TIM S.p.A., of 1,165 million euros, which is equivalent to around 8% of revenues.

**Activities for the future of mobility and networks: initiatives for 5G**

In October 2018, the tender of the Ministry of Economic Development for the award of user rights to 694-790 MHz, 3600-3800 MHz, and 26.5-27.5 GHz band frequencies for 5G mobile telecommunications services was completed, with an overall undertaking for TIM of 2,399 million euros. The rights to 3600-3800 MHz and 26.5-27.5 GHz band frequencies were assigned on a definitive basis in January 2019, while the rights to 694-790 MHz band frequencies will be made available in July 2022. 5G allows not only faster speeds than those possible with earlier technologies, but also a multitude of services with very different requirements, in particular in the mMTC[7] and URLLC[8] areas.

TIM has followed the development of 5G from 2012, actively participating in the definition of international standards as well as European consortia and projects which laid the foundations for the system and contributed to the introduction of innovative use cases and applications. In particular, TIM participated in the European Horizon 2020 METIS and METIS II projects included in the 5GPPP European initiative and in another 12 projects concerning all the main technological turning points of 5G, collaborating with the main providers of network technologies and terminals through specific MoUs.

The operational activities for technological development and 5G trials are accompanied by structured technical communication ranging from publishing to promotion with events of a scientific scope. Several initiatives dedicated to 5G took place during 2018, including the inauguration of the first Innovation Hub in Rome, which was the cornerstone of the agreement. Another important event was held in Turin, at Palazzo Madama, when TIM opened its doors to the public with live demos of 5G services, including automotive, digital tourism, Industry 4.0 and smartcity services, which will soon be available on the network. In Turin, TIM will develop the first 5G network in Italy, pursuant to an agreement with the local authorities, following on from three important projects started in 2017 Torino 5G, San Marino 5G and Bari-Matera 5G for 5G coverage of these municipalities, involving over 55 partners.

In 2018, these projects continued, consolidating activities to provide coverage, with San Marino becoming the first European microstate to be covered by 5G. Research and partnerships with organizations and universities involved for Bari-Matera were also set up and activities will continue in 2019.

Over the next few years, we believe 5G will be the revolution that everyone can experience in their daily lives.

Main applications will target:

· the automotive and transport sector with vehicle-to-vehicle and vehicle-to-infrastructure connectivity, aimed at increasing safety and energy saving, connectivity for infotainment, self-driving vehicles and related aspects;

[7] Massive Machine Type Communication

[8] Ultra Reliable and Low Latency Communications

- industry 4.0 (i.e., the digital transformation of industry), the systematic addition of sensors to products to produce data to improve production and processes, the evolution of the supply chain to enable real-time management of relations with suppliers and end customers;
- the world of new media, with changes in user trends and new formats, including virtual and enhanced reality solutions;
- healthcare with remote assistance to enable specialists to assist patients with chronic diseases from afar;
- public safety with mobile video surveillance solutions that can integrate data and images for a far broader vision, promoting greater public security levels than the past;
- assistance for tourists who can have information and multimedia content on their visits at their fingertips, thanks to sensors on their smartphones; and
- the information sector in general which can ensure live connections with a better video quality without complex instruments, thanks to a greater bandwidth availability, combined with a reduced latency.

**IoT Open Lab**

In November 2016, TIM opened the IoT Open Lab, which became fully operational in 2017, at its base in Turin. Its purpose, according to the methods inherent in Open Innovation, is to support the development of IoT solutions based on key technologies for Telco Operators. In particular, the IoT Open Lab acts as a business accelerator to support companies in entering the ecosystem of technologies standardized by the 3GPP and, as regards the current period, Narrow Band IoT technologies. In 2018, more than 180 companies and customers visited the Lab, and among them, around fifty construction companies agreed a partnership with TIM allowing them to use the Lab s facilities free of charge.

**Research with Universities**

The Open Innovation activities (known as R&D participatory behavior) for 2018 were largely concentrated on the new Innovation model pursued at TIM and guided by top management. Research and development activities in 2018 focused on infrastructure issues and application solutions with a particular emphasis on opportunities afforded by 5G.

As previously disclosed, the financial commitment amounted to 840,000 euros, involving 70 TIM technicians and 60 university researchers dedicated to specific research, including:

- research projects on cognitive computing, artificial intelligence solutions and 5G in partnership with Turin Polytechnic;

- an academic research partnership with various academic organizations as part of the the Ministry of Economic Development Bari-Matera 5G project with full 5G coverage of cities scheduled for 2019, with 10 application areas started and over 70 use scenarios. In 2021, the entire metropolitan area of the 2 cities will be covered;

- research projects started also in partnership with the University of Catania under the technology/innovation plan to fast-track the market delivery of the entire IoT ecosystem and 5G development activities.

**Funded research activities**

TIM has always been active in innovation and research initiatives funded by the European Commission and by national public administrations. This has enabled it to obtain funding of nearly 14 million euros over the 2016-2018 period and to take part in projects with a high innovation content, thanks to which it has been able to develop and consolidate its own know-how in sectors with a fast-paced technological evolution, working together with leading European, North American, Korean and Japanese research centers. TIM has been involved in activities carried out as part of funded projects concerning 5G, virtualization and intelligent mobility services, furthering its expertise and gaining a prominent position in the international sphere.

**Patents and Intellectual Property Rights**

During 2018, the Group s portfolio of patents grew to include new patents filed, and was streamlined, eliminating certain patents that were no longer considered valuable investments, given advances in technological progress. TIM ranks sixth as the Italian company for number of European patents filed.

The patenting areas relate to the whole ICT sector, with areas of excellence in the mobile sector, where TIM is one of the six leading Telcos worldwide.

Specifically, TIM s portfolio of patents included 3,256 patents held by TIM in 2018, of which 2,754 were granted in 41 countries around the world and 502 published in 15 patent offices, relative to some 600 inventions.

A total of 11% of our patented inventions stem from work with universities and research institutes, from 1997 to the present day.

Participation in a Patent Pool for LTE with a patent essential for the relative standard should also be noted. The Patent Pool acquired new participants over the course of the year (bringing the current total to 19 license-holders) and granted several licenses to 42 companies.

**Research and Development in Brazil**

The Innovation & Technology Department, headed by the CTO of TIM Participações, is responsible for Research and Development (R&D) activities. Its main areas of focus include: identifying technological innovation for the network and the evolutionary needs for new technologies and devices, setting architectural guidelines, and the development of strategic partnerships, so as to exploit new business models and guarantee the evolution of the network infrastructure in line with the business strategy. The organizational structure of Innovation & Technology is currently made up of 25 people in the Networks area, including telecommunications engineers, electrics and electronics engineers, IT experts and other technicians of various origins, competences and experiences, who cover all innovative needs and provide support to R&D.

In terms of infrastructure, one important result was the establishment of TIM Lab, a multi-purpose test environment focusing on innovation, which is able to guarantee the assessment of innovative services, products and technologies, certifying their functional efficiency and performance and the development of new models and configurations, consolidating the innovation flow. TIM Lab plays a strategic role in providing support for the conduct of Credibility Test, Trials and Proof of Concept (POC), for the validation of the services in collaboration with the main suppliers of technology and partners, through the sharing of knowledge and the technological infrastructures for interoperability tests, the assessment of capacity and the definition of technical requirements; in synergy with the R&D department, it facilitates innovation and promotes collaborations with universities and research institutes.

In January 2017, a new TIM Lab Innovation Center was opened at the Corporate Executive Offices complex in Barra da Tijuca, in the state of Rio de Janeiro: a building with a surface area of 650 square meters, able to accommodate more than 60 people. This new office hosts technicians and researchers and can be seen as a space of innovation open to new opportunities and the development of innovation for the Brazilian telecommunications market, also operating as a national reference point for R&D activities.

In 2018, more than 180 validation and innovation projects were concluded. Moreover, new technological areas, such as transport and fixed access solutions, were included in the range of initiatives relating to innovation and R&D. In this regard, more than 22 million reais were invested in the 2016/17 period, also for new lab premises, in addition to the 4 million reais in 2018; based on the 2019-2021 plan, further investments of 12 million reais have been allocated.

The Innovation & Technology department continued to work on projects and initiatives aiming to ensure the evolution of the business of TIM Participações through the recommendation of sustainable, efficient network platforms and disruptive models, including anticipating the availability of new services. These projects can be divided into the following groups:

- new generation networks;

- positive environmental and social impacts; and

- Open Lab initiatives.

**Next generation network projects**

The reassignment of the 1,800 MHz, 850 MHz and 2,100 MHz bandwidths from 2G/3G to 4G gives TIM Participações three important competitive advantages:

- reduction of costs for LTE deployment;

- expansion of the LTE coverage area and activation of the Carrier Aggregation strategy, improving the customer experience through higher throughputs ;

- improved indoor coverage. In addition to the expansion of coverage, use of the 850/1,800/2,100 MHz bandwidths could increase the capacity in cities already covered by the LTE bandwidth at 2.6 GHz, at limited additional cost.

Another important consideration in this scenario is that over 94% of current LTE terminals are already compatible with the 1,800 MHz and 2,600 MHz bandwidths, and with the other bandwidths available; hence, implementation of the LTE multilayer is proving to be an excellent strategy that benefits from the dissemination of devices.

The deployment of the LTE 700 MHz layer will result in significant expansion of the coverage and indoor penetration, promoting the presence of LTE throughout the national territory and consolidating TIM Brasil s leadership in LTE. The actual roll-out will follow the rules dictated by the EAD[9] in order to manage the spectrum cleaning and avoid interference problems with the analogue TV transmission service. 82% of the LTE devices employed by the current users of TIM Participações services are enabled for the 700 MHz bandwidth.

At the end of 2018, over 1,400 cities could test the LTE 700 MHz coverage.

In 2015, as part of the IP Multimedia Network Evolution, three tests were carried out at the Innovation Lab to assess the IMS[10]. In 2016 the tests were extended to live networks, allowing TIM Participações to set up the functional infrastructure to provide services such as Voice over LTE (VoLTE), Video over LTE (ViLTE) and Wi-Fi Calling, entirely laid on IP and activated by an IMS platform. In 2017 TIM launched VoLTE high definition voice call services on the market, providing call services without the need to pass through switched lines. At the end of 2018, over 2,500 cities could use this service.

**Projects with positive environmental and social impacts**

The expansion of 4G RAN sharing , in partnership with other Brazilian mobile operators, aims to define the architectural requirements, technical assumptions and specifications for the LTE RAN sharing solution, optimizing the network resources and costs. In this regard, TIM has pursued and considered RAN Sharing Solutions since 2007. Another strong motivation lies in coverage issues and timing in compliance with regulatory requirements. The RAN

Sharing agreement allows TIM to promote the evolution of LTE development in rural areas of Brazil, with effective sharing of access and backhauling. At present 4G RAN Sharing relies on two national partners, improving the possible benefits and efficiencies of this technical model.

Following continuous testing activities, savings and energy efficiency solutions were introduced, which primarily concern the low traffic periods for the 2G, 3G and 4G access layers. The energy consumption recorded for the site, dependent on the access technology and coverage conditions, showed a reduction of up to 10%. According to TIM Participações, the large-scale introduction of IoT could drastically change the mobile market in that it exploits the creation of services and represents a potential tool for agricultural applications, connected vehicles, tracking solutions, and social and healthcare support. In 2017 TIM invested in TIM Lab and in the E2E sector, improving existing smart parking applications and activating the connection of new applications, preparing the terrain for future NB-IoT and LTE-M commercial networks, which were launched in 2018 in the city of Santa Rita do Sapucai.

[9] Entidade Administradora de Processo de Redistribuição e Digitalização de Canais de TV e RTV

[10] SMI: IP Multimedia Subsystem, solutions focused on functional tests, specific analyses and interoperability with the so-called legacy system

Since 2018, TIM Participações together with Nokia and BR Digital, has offered connectivity services in rural areas, not only enabling agrobusiness commercial applications, but also the digital inclusion of sector employees and residents in small towns.

**Open Lab initiatives**

In 2017 TIM Participações joined the Telecom Infra Project (TIP), an initiative founded by Facebook, SK Telecom, Deutsche Telekom, Nokia, Intel and other companies, which aims to identify new approaches to the creation and deployment of telecommunications network infrastructure. TIM Participações has transformed TIM Lab into the first TIP Community Lab in Latin America, which will be used by TIP members to create universal standards relating to solutions, initially for transport networks, in order to overcome the challenges linked to the interoperability of the different providers. This initiative represents an open and collaborative approach to the development and testing of new technologies and solutions.

In October 2018, TIM joined up with a new work team in the Telecom Infra Project (TIP) together with Vodafone and other mobile operators, called DCSG (Disaggregated Cell Site Gateway). This project is an opportunity to define a common set of requirements to produce devices that are more open, flexible and cost-effective.

## 5.5 CAUTIONARY STATEMENT FOR PURPOSES OF THE SAFE HARBOR PROVISIONS OF THE UNITED STATES PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements. The foregoing discussion in Item 5 Operating and Financial Review and Prospects and the following discussion under Item 11 Quantitative and Qualitative Disclosures About Market Risks contain forward looking statements.

Forward-looking statements are statements that are not historical facts and can be identified by the use of forward-looking terminology such as believes, may, is expected to, will, will continue, should, seeks or similar expressions or the negative thereof or other comparable terminology, or by the forward-looking nature of discussions of strategy, plans or intentions.

Actual results may differ materially from those projected or implied in the forward-looking statements. Such forward-looking information is based on certain key assumptions which we believe to be reasonable but forward-looking information by its nature involves risks and uncertainties, which are outside our control, that could significantly affect expected results.

The following important factors could cause actual results to differ materially from those projected or implied in any forward-looking statements:

- our ability to successfully implement our strategy in the future;
- a deterioration of the economic environment in the principal markets in which we operate, including, in particular, our core Italian market;
- the impact of regulatory decisions and changes in the regulatory environment in Italy, Brazil and other countries in which we operate, including the ability of the Italian Government to exercise its power with respect to our ability to enter into strategic transactions;
- our ability to successfully compete on both price and innovation capabilities with respect to new products and services;
- our ability to develop and introduce new technologies that are attractive in our principal markets, to manage innovation, to supply value added services and to increase the use of our fixed and mobile networks;

- our ability to successfully implement our internet and broadband/ultrabroadband strategy;
- our ability to successfully achieve our financial targets (including debt reduction);
- the impact of fluctuations in currency exchange and interest rates and the performance of the equity markets in general;
- the outcome of litigation, disputes and investigations in which we are involved or may become involved;
- our ability to build up our business in adjacent markets and in international markets (particularly in Brazil), due to our specialist and technical resources;
- our ability to achieve the expected return on the investments and capital expenditures we have made and continue to make in Italy, Brazil and other countries in which we operate;
- the amount and timing of any future impairment charges for our authorizations, goodwill or other assets;
- our ability to manage any business or operating model transformation plans;
- disruptions or uncertainties resulting from the United Kingdom s expected exit from the European Union;
- any difficulties which we may encounter in our supply and procurement processes, including as a result of the insolvency or financial weaknesses of our suppliers; and
- the costs we may incur due to unexpected events, in particular where our insurance is not sufficient to cover such costs.

The foregoing factors should not be construed as exhaustive. Due to such uncertainties and risks, readers are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date hereof. We undertake no obligation to release publicly the result of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof, including, without limitation, changes in our business or acquisition strategy or planned capital expenditures, or to reflect the occurrence of unanticipated events.

## Item 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

### 6.1 DIRECTORS

A full renewal of the Board of Directors took place on May 4, 2018, following the majority of the Board members resigning from office, namely:

- on March 22, 2018, the Executive Deputy Chair resigned, effective as of the same day;
- the Executive Chair and Directors Camilla Antonini, Frédéric Crépin, Felicité Herzog, Marella Moretti, Hervé Philippe and Anna Jones resigned, effective as of April 24, prior to the beginning of the AGM which took place on the same day.

This triggered the entire Board ceasing to hold office as of April 24, 2018, which resulted in a separate, additional shareholders meeting convened, taking place on May 4, 2018,

On April 24, 2018, Director Amos Genish (who had been co-opted following the resignation of Flavio Cattaneo in 2017 and at the time was the Company s CEO) ceased from office as well. The ordinary Shareholders Meeting immediately reappointed him.

On May 4, 2018, the Shareholders Meeting of the Company elected the Board of Directors of TIM presently in office, whose term of office is until approval of the 2020 annual financial statements.

The May 4, 2018 Shareholders Meeting established the number of Directors at 15 and set the overall annual remuneration for the Board of Directors at 2,200,000 euros (to be divided among the members thereof in accordance with the resolutions to be adopted by the Board itself).

On May 7, 2018, the Board of Directors appointed Fulvio Conti as Chairman of the Company s Board of Directors and Amos Genish as Chief Executive Officer of the Company.

On November 13, 2018, the Board of Directors resolved by majority vote to revoke all the powers already conferred on Director Amos Genish.

On November 18, 2018, the Board of Directors to appointed Director Luigi Gubitosi as the new Chief Executive Officer and General Manager.

As of April 8, 2019, the Board of Directors of TIM was composed of the following directors:

| Name | Age | Position | Appointed |
|---|---|---|---|
| Fulvio Conti(1) | 71 | Chairman/Director | 2018 |
| Luigi Gubitosi(2) | 57 | | 2018 |

| | | | |
|---|---|---|---|
| | | Chief Executive Officer/Director/General Manager | |
| Alfredo Altavilla(1) | 55 | Director | 2018 |
| Paola Bonomo(1) | 49 | Director | 2018 |
| Giuseppina Capaldo(1) | 49 | Director | 2018 |
| Maria Elena Cappello(1) | 50 | Director | 2018 |
| Massimo Ferrari(1) | 57 | Director | 2018 |
| Amos Genish | 58 | Director | 2018 |
| Paola Giannotti(1) | 56 | Director | 2018 |
| Marella Moretti(1) | 53 | Director | 2018 |
| Lucia Morselli(1) | 62 | Director | 2018 |
| Dante Roscini(1) | 60 | Director | 2018 |
| Arnaud Roy de Puyfontaine | 55 | Director | 2018 |
| Rocco Sabelli(1) | 64 | Director | 2018 |
| Michele Valensise(1) | 67 | Director | 2018 |

(1) Independent Director according to legal requirements. For details on the criteria applied to determine independence, see Item 10. Additional Information 10.1 Corporate Governance.

(2) He was appointed as Chief Executive Officer/General Manager starting from November 18, 2018.

(3) On November 13, 2018, the Board of Director revoked all the powers already conferred to Director Amos Genish, who therefore ceased in his role as CEO.

On April 8, 2019, the Secretary of the Board of Directors was the General Counsel of TIM, Agostino Nuzzolo.

In 2018:

- the Board of Directors met 21 times, with meetings generally scheduled pursuant to a calendar set forth in advance;
- the Control and Risk Committee, which as of April 8, 2019 was composed of Paola Giannotti (Chairwoman), Massimo Ferrari, Marella Moretti, Lucia Morselli and Michele Valensise, held 21 meetings. Where deemed desirable in light of the issues on the agenda, the Committee and the Board of Auditors held joint meetings;
- the Nomination and Remuneration Committee, which as of April 8, 2019 was composed of Alfredo Altavilla (Chairman), Paola Bonomo, Giuseppina Capaldo, Rocco Sabelli and Michele Valensise, met 14 times;
- the Strategic Committee which as of April 8, 2019, was composed of Fulvio Conti (Chairman), Luigi Gubitosi (CEO), Massimo Ferrari, Arnaud Roy de Puyfontaine and Rocco Sabelli, met 4 times; and
- the Related Parties Committee, which as of April 8, 2019 was composed of Lucia Morselli (Chairwoman), Giuseppina Capaldo, Maria Elena Cappello, Marella Moretti and Dante Roscini, met 9 times.

For a detailed description of TIM s corporate governance, including activities, responsibilities and organization of the Board of Directors and the Committees, see Item 10 Additional Information 10.1. Corporate Governance .

* * *

### 6.1.1 BIOGRAPHICAL DATA

The following are the selected biographical data of the Directors as of April 8, 2019.

**Fulvio Conti**: Mr. Conti was born in Rome, Italy in 1947. Since May 2018 he has served as Chairman of Telecom Italia. A graduate of La Sapienza University of Rome with a degree in Economics, he also currently serves as sole Director of FAS Partners S.r.l., a financial strategic investor and advisor. He is a promoter and board director of the Fondo Efficienza Energetica SGR S.p.A., and serves as Chairman of SGI (Società Gasdotti Italiani). He was Chairman of Innova Italy.1, a SPAC listed company, until its merger with Fine Foods & Pharmaceuticals N.T.M, where he is now member of the Board of Directors. Since 2014 he has served as Senior Advisor of the investment fund MIRA (Macquarie Infrastructure and Real Assets), Europe Ltd. He was Chief Executive Officer and General Manager of Enel from 2005 to 2014. He joined Enel in 1999 as Chief Financial Officer and led the most important financial transactions of the Group at the time, such as the IPO of Enel, Terna and Enel Green Power, and Enel 2 and Enel 3 Global Offerings. As CEO he led Enel s international expansion. He finalized the successful takeovers of

Endesa SA, the leading power company in Iberia and South America, of the genco OGK-5, the first company s acquisition made in Russia from a foreign group, and of Slovenské elektráne, the Slovak power utility. He also finalized the formation and further listing of Enel Green Power. He held the position of President of Eurelectric from 2011 to 2013. He has broad international experience having worked in several industries for major international companies in Belgium, United Kingdom and USA. He started his career in 1969 with Mobil Oil. In 1989 he was appointed Financial Director at Mobil Oil UK, in London, after holding different positions in oil, chemical and plastic sectors. In 1991 he held the position of Chief of Administration, Finance and Control of Campbell s in London and Brussels. In the same year, he moved to Montecatini, as Chief Financial Officer and in 1993 he was promoted to the role of Finance Director of the Holding Montedison-Compart, where he actively participated to the plan of restructuring Ferruzzi Group. In 1996 he was General Manager and Chief Financial Officer of Ferrovie dello Stato, with important responsibilities in subsidiaries of the Group such as Metropolis (Real Estate) and Grandi Stazioni. In 1997 he was appointed Vice-President of Eurofima. In 1998 he joined Telecom Italia S.p.A. as General Manager and board director in TIM, Finsiel, Sirti, Italtel, Meie, STET International and other subsidiaries, which positions he kept until 1999. He sits in the boards of directors of the Italian Technology Institute, AON Plc UK and USA, Unidad Editorial Spain, RBC PJSC Russia. He also served as member of the board of directors of Barclays, RCS Media Group and the Academy of Santa Cecilia. He was deputy chairman of Confindustria overseeing the Economic Research Department between 2012 and 2014. He was a lecturer of Corporate Finance at the MBA, School of Economics of the LUISS University, Rome. In 2007 he was awarded with the Doctor Honoris Causa degree in Electrical Engineering, from Genoa University. In 2009 he was appointed Cavaliere del Lavoro of the Italian Republic and Officier de la Légion d Honneur of the French Republic.

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**Item 6. Directors, Senior Management and Employees** **Directors**

**Luigi Gubitosi**: Mr. Gubitosi was born in Naples, Italy in 1961. Luigi Gubitosi studied at the London School of Economics and obtained a Law degree at Naples University and a Master in Business Administration at I.N.S.E.A.D. Fontainbleau (France). He has been Vice Chairman of Confindustria Servizi Innovativi e Tecnologici (CSIT) and of Asstel and a member of the Tax and Corporate Governance Committee of Confindustria. He was member of Chess Olympiad Torino 2006 Organising Committee and member of the Board of Directors of Cometa (Pension Fund of metal workers), F2i Sgr and Maire Tecnimont. From 1986 to 2005 he held several offices within the Fiat Group: Chief Financial Officer, Administration Director and Group Treasurer; he has been Chairman of the Board of Directors of Fiat Partecipazioni and member of the Board of Directors of Fiat Auto, Ferrari, Iveco, Itedi, Comau and Magneti Marelli. In 2005 he joined Wind Telecomunicazioni as Chief Financial Officer, and was CEO from 2007 to 2011. From November 2011 to July 2012 he was Country Manager and Head of Corporate and Investment Banking of Bank of America Merrill Lynch Italy. From July 2012 to August 2015 he has been General Manager of RAI. He has been Chairman of the European Advocacy Committee of the CFA Institute and Independent Director of TIM S.p.A. from May to November 2018. From May 2, 2017 to November 20, 2018 Mr. Gubitosi was coordinator of the government appointed commission of company Alitalia Società Aerea Italiana S.p.A. under extraordinary administration.

In November 2018 he was appointed Chief Executive Officer and General Manager of Telecom Italia.

**Alfredo Altavilla**: Mr. Altavilla was born in Taranto, Italy in 1963. He holds a degree in Economics from Università Cattolica, Milan where he began his career as an assistant. He was Chief Operating Officer Europe, Africa and Middle East (EMEA) from November 12, 2012 to August 2018 at FCA N.V. He has also been a member of the Group Executive Council (GEC) and Head of Business Development since September 1, 2011. In 1990, he joined Fiat Auto, where he initially focused on international ventures in the area of strategic planning and product development. In 1995, he was appointed head of Fiat Auto s Beijing office and in 1999 head of Asian Operations. He has been involved in Business Development since 2001, responsible for coordination of the alliance with General Motors in 2002 and, in 2004, was assigned responsibility for management of all alliances. In September 2004, Mr. Altavilla was appointed Chairman of FGP (Fiat/GM Powertrain JV) and Senior Vice President of Business Development of Fiat Auto. In July 2005, he became CEO of Türk Otomobil Fabrikasil A.S. (TOFAS) a 50-50 joint venture between Fiat Auto and Koç Holding listed on the Istanbul stock exchange while retaining his role as head of Business Development. In November 2006, he was named Chief Executive Officer of FPT Fiat Powertrain Technologies. In July 2009, he became a member of the Board of Directors of Chrysler Group LLC and in October 2009 was named Executive Vice President of Business Development for Fiat Group. From November 2010 to November 2012 he was President and Chief Executive Officer of Iveco. He was also a member of the Fiat Industrial Executive Council (FIEC) from January 2011 to November 2012. He is Board Member of Actuant Corp.and Tim S.p.A.

**Paola Bonomo**: Ms. Bonomo was born in Marostica (Vicenza), Italy in 1969. She started her career at McKinsey & Company, where she was an advisor to top management teams at leading international companies on strategic positioning, growth, new markets, alliances and acquisitions. She then worked in leadership roles such as Senior Director, European Operations at eBay International; Head of Online Services, Commercial Operations at Vodafone Italia; and Regional Director, Southern Europe at Facebook. Since 2009 she has invested in technology startups with Italian Angels for Growth, where she focuses on investments in the digital space. In 2015 and in 2016, she was recognized as one of the Inspiring Fifty, the fifty most inspiring women in European Technology. In 2017, she was awarded the Business Angel of the year award in Italy and the Golden Aurora award for the best woman business angel in Europe. She serves on the Boards of Directors at AXA Assicurazioni S.p.A., Piquadro S.p.A., Sisal Group S.p.A., Stefanel S.p.A. and FAAC S.p.A.. She is also the President of Stanford Club Italia, the local Stanford University alumni chapter. Ms Bonomo holds an undergraduate degree in Business Administration from Bocconi

University in Milan and an MBA from the Stanford Graduate School of Business.

**Giuseppina Capaldo:** Ms. Capaldo was born in Rome, Italy in 1969. She achieved a degree in Economics and a degree in Law from La Sapienza University of Rome, has been a licensed certified public accountant since 1992 and has been listed in the Register of Independent Auditors (since 1999). In addition, Ms. Capaldo has been qualified to practice law in Italy since 2003. Mrs. Capaldo is Full Professor of Private Law at La Sapienza University of Rome and she has been Deputy Rector for Resource Planning and Assets (since 2014). She currently serves as Independent Director of Salini Impregilo (2012-present); Ferrari N.V. (2015-present) and TIM S.p.A. (2018-present). She served as Independent Director of the Board of Exor S.p.A. from 2012 to 2015; Credito

Fondiario S.p.A. (2014-2017); Banca Monte dei Paschi S.p.A. (December 2017-April 2018). She was a member of the Board of Directors of Ariscom S.p.A. from 2012 to 2015 and A.D.I.R.- Assicurazioni di Roma (2006-2010). She collaborated with the Macchi di Cellere Gangemi law firm in the Banking and Finance, Corporate and M&A sectors (2004-2007). She served, at La Sapienza University, as Deputy Rector for Strategic Planning (2008-2014); Head of Department of Law and Business (D.E.A.P.) (2007-2013); Director of PhD Contract Law and Business (2007-2011); and Director of LLM Financial Markets Law (2009-2014). She authored several publications in the areas of contract law, insurance law, financial law and market legal theory.

**Maria Elena Cappello:** Ms. Cappello was born in Milano, Italy in 1968. She graduated in Engineering at the University of Pavia. In 1995, she completed an Executive Master s Degree in Strategic Marketing and Sales Techniques at Babson College, MA (USA) and in 1998 she obtained an Executive Master s Degree in Marketing Management from SDA Bocconi in Milan. In 1991, she joined Italtel S.p.A. as System Consultant in the Business Unit Switching OSS and in 1994 moved to Emc Italia S.p.A., where she was later appointed Manager of the Public Administration Division and Telecom Division. In 1998, she joined Compaq Computers (later Hewlett Packard) in Munich (Germany), where she served as EMEA Storage Division Marketing Manager, EMEAS Storage Division Business Development Manager EMEA, Global Services Executive Director and EMEA Service Provider Group Executive Director. In 2002, she founded and developed the Milan-based European branch of MetiLinx Inc., an innovative U.S. software company. She was also a member of the Executive Committee of MetiLinx Inc. in San Mateo CA (USA) and was appointed its Chief Executive Officer for UK, Germany and Italy. In 2005, she took on the role of Senior Vice President of Sales in Pirelli Broadband Solutions S.p.A. In 2007, she joined Nokia Siemens Networks (now Nokia), Milan and London offices, as Head of Global Strategic Marketing and from 2010 to 2013 she served as CEO, General Manager and Deputy Chairman of the Board of Directors of Nokia Siemens Networks Italia S.p.A. and Nokia Siemens Networks S.p.A. (real estate company). Since 2012 she has been an independent Director of Prysmian S.p.A. Since 2015 she has been independent Director of Saipem S.p.A. and Banca Monte dei Paschi di Siena. She was independent Director of SACE S.p.A. until June 2014 and served on the Management Board of A2A S.p.A. where she was also member of the Board of Directors until 2017. From 2015 to 2018 she has been independent Director of Seat Pagine Gialle S.p.A. and Italia online S.p.A. She is also amember of the Board of Directors of Fondazione ENI Enrico Mattei. She is member of Fortune s World s Most Powerful Women, Women Corporate Directors and of World Economic Forum for the Climate Change Chapter.

**Massimo Ferrari:** Mr. Ferrari was born in Rome, Italy in 1961. He holds a Degree in Economics and Business Administration from the LUISS Guido Carli University of Rome. He is currently General Manager Corporate & Finance Group CFO of Salini Impregilo S.p.A. and member of the Board of Directors of Lane Industries Inc. He is also Board Member of Tim S.p.A., Equita Group S.p.A. and Cairo Communication. He has a role as Professor at Luiss Guido Carli University in Rome. He spent more than 20 years in the Asset Management industry as portfolio manager, head of investments and CEO in various companies (Fondinvest, Gestifondi, Romagest, Capitalia Asset Management, Fineco Asset Management). He has also served as Head of Issuer Division of CONSOB (Italian Market Authority). Past appointments saw him Board Member of Borsa Italiana S.p.A. (Italian Stock Exchange), member of Assogestioni, Assosim and Assoreti.

**Amos Genish:** Mr. Genish was born in Hadera, Israel in 1960. He was Chief Executive Officer and General Manager of TIM from September 2017 to November 2018. From the beginning of 2017 through to July of the same year, he had the responsibility of Chief Convergence Officer in Vivendi. In this role he oversaw the convergence strategy between content, platforms and distribution. Until the end of 2016, Amos Genish was CEO of Telefonica Brasil / Vivo. During his tenure, Telefonica Brasil / Vivo outperformed the Brazilian telecom market in revenue and

EBITDA growth, as well as in total shareholder return. In 2016, Mr Genish was ranked as Latin America s best CEO in the Technology, Media and Telecommunications industry by Institutional Investor. He joined Telefónica at the beginning of 2015, when it acquired GVT, an innovative and fast-growing telecom and Pay TV operator, of which he was CEO. After having co-founded GVT, he was its CEO starting from 1999, he led the successful bid for the mirror license of region 2 in Brazil. In 2007, Amos led GVT s IPO in the Brazilian stock exchange. In 2009, he led the company s sale to Vivendi (from 2011 to 2013, he was part of Vivendi s Management Board). In 2014, he led the negotiations of GVT s sale to Telefónica (7.45 billions deal). Prior to this, he was CEO of GVT rural telecom operation, where he managed the initial fund raising to start the activities of the company and support the launch of services in Chile, Peru and Colombia. From 1989 Amos joined as CFO the start-up Edunetics Ltd., which developed comprehensive curriculum multimedia-based systems mostly for the US school market. In 1992 he led jointly with the CEO the IPO of the company on Nasdaq. In 1995 he was

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appointed CEO of it. From 1986 to 1989 Amos worked in one of the largest accounting firm in Israel (KMPG Israel as of today), where he was involved in the audit and tax work of large holding companies. Recently, from the beginning of 2017 to July 2017, he held the position of Chief Convergence Officer in Vivendi. In this role, Mr Genish oversaw the Group s convergence strategy between content, platforms and distribution. He is a member of the Board of Representatives of Vevo the leading international music video hosting company co-owned by Universal Music Group, Sony Music Entertainment, Google and Abu Dhabi Media Company and member also of the Board of Itaù Unibanco Holding Sa, the largest Brazilian publicly listed bank. He holds a B.A. in Economics and Accounting from Tel Aviv University.

**Paola Giannotti:** Ms. Giannotti was born in Alessandria, Italy in 1962. She has a degree cum laude in Political Economics from the Bocconi University of Milan. She attended some semesters at Universität zu Köln (Colonia, Germania) and New York University. She is a Board member of Terna S.p.A., Ubi Banca S.p.A., ICF Group S.p.a., EPS Equita PEP SPAC 2 S.p.A. and TIM S.p.A. At TIM and Ubi Banca she is Chair of the Risk Committee. She has held various managerial roles throughout her thirty years of international experience in the financial sector, in the corporate and investment banking area, working in corporate finance as well as in the capital markets, extraordinary-operations and project-financing sectors. Through the years she held various operational and management positions in New York, London, Milan, Frankfurt and Paris in leading international companies such as Morgan Stanley, Citigroup, Dresdner Bank e BNP Paribas where she developed the strategic Italian customer base (MEF, Telecom Italia, Eni, Enel, Terna, Ferrovie, Finmeccanica). She has been Director on the Board of Ansaldo STS S.p.A. and Dresdner Kleinwort Wasserstein SGR. In 2002 she was recognized with the Belllisario Foundation Award as Manager of the Year. From 2000 to 2012 she was member of the Council for the United States and Italy under the honorary chairmanship of David Rockfeller.

**Marella Moretti:** Ms. Moretti was born in Torino, Italy in 1965. She is a graduate of the Amministrazione Aziendale Business School of the University of Turin, where she specialized in Finance. She started her career in 1988 as International Corporate Finance Analyst at Fiat SpA in Italy. From 1991 to 1996, she worked as head of Financial Planning and Control at Fiat France, in Paris. Ms. Moretti then went on to hold several successive positions at Fiat France: Head of Corporate Finance (1996-1998); Deputy Chief Financial Officer (1998- 1999) and Chief Financial Officer (2000-2005). Since 2005, she has been Chief Financial Officer of Fiat Chrysler Finance et Services in Paris. She also currently holds other positions within the Fiat Chrysler Automobiles and CNH Industrial groups in France. Since 2009, she has been Managing Director (Directeur General delegué) and Board member of CNH Industrial Financial Services, the captive finance company for CNH Industrial in Europe region, regulated by the French Central Bank Authority ACPR. Since 2011, she has been Chief Executive Officer and Board member of CNH Industrial Finance France and she has served as a member of the Board of Directors of Fiat Chrysler Finance Europe. From 2011 to 2014, she also served as an independent member of the Supervisory Board and of the Audit Committee of Unibail-Rodamco, Europe s leading commercial property company, listed on the Paris Stock Exchange. She is a member of MEDEF Europe commission (French employers confederation), of the NGO Care France and of the Women Corporate Directors organization (international chapter). Since 2017 she has been a Director of Telecom Italia S.p.A.

**Lucia Morselli:** Ms. Morselli was born in Modena, Italy in 1956. She graduated with the highest grades in Mathematics at the University of Pisa. She completed a PhD in Mathematical Physics at the University of Rome and she holds two master degrees, one in Business Administration at the University of Torino and the other in In European Public Administration at the University of Milan. She started her career at Olivetti S.p.A. as collaborator of the CFO in 1982; from 1985 to 1990 she was a Senior Manager of the Strategic and Manufacturing Service at Accenture; from

1990 to 1995 she was the CFO of the Aircraft Division Department at Finmeccanica S.p.A. Subsequently she was the Chief Executive Officer of Telepiu Group (1995-1998), of News Corporate Europe and Stream (Sky) S.p.A (1998-2003), of Tecnosistemi S.p.A (2004), of Mikado S.p.A. and Compagnia Finanziaria S.p.A., (2009), of Bioera S.p.A (2010-2011), of Berco Group (2013-2014) and of Acciai Speciali Terni (2014-2016). She also served as Chair of the Board and Chief Executive Officer of Scorpio Shipping Group Ltd.and also Member of the Board of Directors of NDS and IPI S.p.A.. She has been Deputy Chairman of Ital Brokers S.p.A. Ms. Morselli is Member of the Board of Snam S.p.A., Fondazione Snam, Sisal Spa, TIM S.p.A. and EssilorLuxottica (Paris). She Is CEO of Acciaitalia S.p.A. and Member of World Economic Forum for the Climate Change Chapter, Head of the Economy Department of Unilink Campus University (Roma) and member of the Advisory Board of Veneranda Fabbrica del Duomo di Milano. In 2003 she founded the consultancy firm Franco Tatò & Partner.

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**Item 6. Directors, Senior Management and Employees** **Directors**

**Dante Roscini:** Mr. Roscini was born in Perugia, Italy in 1958. He was educated in Switzerland and France where he received a baccalauréat in mathematics and physics. He then studied Nuclear Engineering at the University of Rome La Sapienza from which he graduated with honors and subsequently received a Master in Business Administration from Harvard. Prior to getting his MBA, he worked for five years as an engineer and a project manager at Nucleare Italiana Reattori Avanzati (Ansaldo Group) in Genova and Westinghouse Electric Corporation in Pittsburgh. Since 2008 he has been a member of the Faculty of Harvard Business School in the Business, Government and the International Economy department. In 2011, Harvard awarded him the L.E. Simmons Fellowship. Before his academic career, he held for twenty years senior positions at three leading US investment banks. In such roles, he assisted companies and governments in numerous countries and sectors in planning and executing financial transactions such as capital increases, privatizations, initial public offerings, global equity and fixed income offerings and mergers and acquisitions. He was the first Italian Associate hired by Goldman Sachs where he worked in New York and London from 1988 to 1999. Promoted to Managing Director in 1996 he ran the European Capital Markets Division. In 1999, Merrill Lynch offered him the role of Head of the Global Capital Markets Division and of the Financing Group. In 2005, he accepted the position of Chairman of Capital Markets of Morgan Stanley, CEO of Italy, and board member of Morgan Stanley International Bank. He is currently Chairman of Credimi, an Italian FinTech startup; Board member and Chairman of the Remuneration Committee of Kairos, a Julius Baer Group company and President of the advisory board of IDeA Corporate Credit Recovery fund. He is a member of the Scientific committee of the Centro Studi Confindustria; International advisory board of Akbank and the strategic committee of Nevastar Finance; American Economic Association; National Association of Business Economics; Minda de Gunzburg Center for European Studies at Harvard; Strategic advisory board of the BIDMC Hospital Cancer Center. He has been a board member of SACE and of Promethean Group Ltd, a company formerly listed on the London Stock Exchange for which he was Chairman of the Remuneration Committee.

**Arnaud Roy de Puyfontaine**: Mr. Roy de Puyfontaine was born in Parigi, Italy in 1964. He is a graduate of the ESCP (1988), the Multimedia Institute (1992) and Harvard Business School (2000). He has been, since December 15, 2015, a member of the Board of Directors of Telecom Italia. In 1989, he started his career as a consultant at Arthur Andersen and then worked as a project manager at Rhône-Poulenc Pharma in Indonesia. In 1990, he joined Figaro as Executive Director. In 1995, as a member of the founding team of the Emap Group in France, he headed Télé Poche and Studio Magazine, managed the acquisition of Télé Star and Télé Star Jeux, and started up the Emap Star Division, before becoming Chief Executive Officer of Emap France in 1998. In 1999, he was appointed Chairman and Chief Executive Officer of Emap France, and, in 2000, joined the Executive Board of Emap Plc. He has led several M&A deals, and from 2000 to 2005, served as Chairman of EMW, the Emap/Wanadoo digital subsidiary. In August 2006, he was appointed Chairman and Chief Executive Officer of Editions Mondadori France. In June 2007, he became General Head of all digital business for the Mondadori Group. In April 2009, he joined the US HEARST media group as Chief Executive Officer of its UK subsidiary, Hearst UK. In 2011, on behalf of the Hearst Group, he led the acquisition of 102 magazines from the Lagardère Group published abroad, and, in June 2011, was appointed Executive Vice President of Hearst Magazines International. In May 2012 he joined the Board of Directors of Schibsted. Then, in August 2013, he was appointed Managing Director of Western Europe. He was Chairman of ESCP Europe Alumni. From January to June 2014, he was a member of Vivendi s Management Board and Senior Executive Vice President in charge of its media and content operations. Since June 24, 2014, he has been CEO and Chairman of the Management Board of Vivendi. He was appointed Deputy Chairman (2016) and Executive Chairman of TIM from June 2017 to May 2018. He currently helds the following positions within the Vivendi group: CEO and Chairman of the Management Board of Vivendi; Chairman of the Supervisory Board of Universal Music France; Member of the Supervisory Board of Canal+Group; permanent representative of Vivendi on the Supervisory Board of Banijay Group and Director of Havas. His other positions and functions include: Member of the Advisory Committee of Innit and Honorary Chairman of the French-American Foundation.

**Rocco Sabelli:** Mr. Sabelli was born in Agnone (Isernia), Italy in 1964. He graduated in Chemical Engineering. From 1981 to 1983 he served as Assistant to the Production Manager in an agri-food company. From 1983 to 1985 he joined GEPI (now Invitalia) as Junior Analist (company check-ups, Business Planning, Dealing) where he dealt with Mergers and Acquisitions in industrial and employment crisis areas (sale of assets or company branch/badwill, for new business initiatives). From 1985 to 1992 he held various positions within Eni Group. From 1993 to 2001 he joined Telecom Italia Group. He was Head of Planning & Control Department of Regione Lazio and of the Central Department of Information Technology; Controller Deputy General Manager (Administration, Finance and

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Control Purchasing and management of the goods and Network Information Technology) in Telecom Italia Mobile. He served as General Manager Wireline Services Fixed Network Services and Internet for the Italian market (Corporate customers, Small and medium enterprises, domestic customers); Public Telephony services and Directories; Wholesale services for the international market (phone traffic, Broadband and data service with companies as Mediterranean Nautilus, Latin America Nautilus, etc,); Staff Functions (Purchasing, HR, Administration and Control); and Accountability on P&L and Capital allocation. In 2002 he was one of the founding partners of Omniainvest, holding of industrial investments where he has been appointed Chief Executive Officer. In 2003 he served as Chief Executive Officer of Immsi S.p.A. (acquisition of Piaggio, Cantieri Navali Rodriguez), an industrial holding and real estate Company listed on the Milan Stock Exchange. From 2003 to 2006 he acted as Chief Executive Officer of Piaggio S.p.A. From 2006 to 2008 he took over Data Service (about 18% together with Tamburi Investment Partner and, afterwards Intesa San Paolo) becoming Chairman of the Company (now BE S.p.A.), one of the major Italian players of the technological and operational outsourcing market (banks, insurance companies, service companies, public and private) listed on the Milan Stock Exchange. From 2008 to 2012 he took part in the privatization process of Alitalia (extraordinary administration). Subsequently he was appointed Chief Executive Officer and General Manager for the implementation of the Industrial Plan. From 2012 he served as Operating Partner of private equity funds (Clessidra, NUO Capital and 4R).

**Michele Valensise:** Mr. Valensise was born in Polistena (Reggio Calabria), Italy in 1952. Ambassador Michele Valensise holds a degree in Law at Università La Sapienza in Roma. He joined the diplomatic service in 1975. After various assignments at the Ministry of Foreign Affairs and abroad (Brazil, Germany, Lebanon, European Union), he was appointed Head of the Press Service, Spokesman and Chief of Staff of the Minister of Foreign Affairs. He was assigned as Italian Ambassador to Sarajevo, Brasilia and Berlin. From 2012 to 2016 he was Secretary-General of the Farnesina. Currently he is Vice Chairman of Astaldi S.p.A., leading company of the infrastructure sector. Since 2017 he has also been Chairman of the German-Italian Center for European Excellence. He is an editorialist of the Italian newspaper La Stampa .

None of the Directors has a service contract.

## 6.2 EXECUTIVE OFFICERS

As of April 8, 2019 the executive officers of TIM and their respective positions were as follows:

| Name | Age | Position | Appointed |
|---|---|---|---|
| **Directors:** | | | |
| Luigi Gubitosi(1) | 57 | Chief Executive Officer/General Manager | 2018 |
| **Managers:** | | | |
| Lorenzo Forina(2) | 46 | Chief Revenue Office | 2018 |
| Pietro Labriola(3) | 51 | CEO Tim Participacoes | 2019 |
| Carlo Nardello(4) | 55 | Chief Strategic Customer Experience & Transformation Office | 2019 |
| Agostino Nuzzolo | 51 | Head of Legal and Tax | 2018 |
| Piergiorgio Peluso | 51 | Chief Financial Officer and Head of Administration Finance and Control | 2012 |
| Federico Rigoni(5) | 52 | Procurement Unit & Real Estate | 2019 |
| Elisabetta Romano(6) | 56 | Chief Technology & Innovation Office | 2018 |
| Luciano Sale(7) | 58 | Human Resources & Organizational Development | 2019 |
| Stefano Siragusa(8) | 43 | Chief Wholesale Infrastructures Network & Systems Office | 2018 |

(1) Since November 18, 2018.

(2) Since January 18, 2019 he has been Chief Revenue Office of TIM.

(3) Since April 3, 2019.

(4) Since February 20, 2019.

(5) Since April 1, 2019.

(6) Since July 1, 2018.

(7) Since February 5, 2019.

(8) Since March 12, 2018 he was appointed Chief Infrastructures Office & Transformation Office subsequently renamed Chief Wholesale Infrastructures Network & System Office.

**Lorenzo Forina**: Mr. Forina was born in Genoa, on 1973. Starting from 18 January 2019 he was appointed Head of the Chief Revenue Office. From 24 September 2018 until January 2019 he was Head of Business & Top Clients Office. Mr. Forina graduated in mechanical engineering at the University of Genoa with honors. Mr. Forina received a master s degree in Business Administration from INSEAD (Campus Europa) in Fontainebleau, France. From 1997 to 1998 he was a technical engineer for D Appolonia. From January to April 1998 he was a Value Partner consultant in Milan. From April 1998 to March 2013 he was a partner of McKinsey and Company. From April 2013 until July 2016, Forina was Chief Marketing Officer of the Consumer division of TIM. Since July 2016 to September 2018, Mr. Forina has been Domestic Business Division Director of TIM.

**Pietro Labriola**: Mr. Labriola was born in Altamura (Bari), Italy on October 1, 1967. From 1993 to 1994 he worked at France Telecom Italia, in Milan, where he was appointed Assistant to the Managing Director. In 1995 he worked at Cable & Wireless Italia as Marketing Director. In 1996 he worked at Infostrada S.p.A as Director of Business Development. In 1997 he worked as a consultant for Boston Consulting Group in Italy. In 1998 he was appointed Marketing Director of Infostrada S.p.A. In 2001 he started working for Telecom Italia Group, holding management positions of increasing responsibility, beginning as Voice Marketing Director with the launch of ADSL ALICE Offer, among others. In 2005 he was appointed Marketing Director for Fixed & Mobile Services. Keeping his managerial responsibility, in 2006 he became CEO of Matrix. In 2007 Mr. Labriola was appointed Head of Domestic Fixed Services and in 2009 he took the role of Head of Business Unit for fixed, mobile and ICT services, launching Impresa Semplice. In 2013 he took the responsibility of coordinating the network spin-off project and in 2014 he became Head of Business Transformation & Quality. In 2015 he was appointed Chief Operating Officer at TIM PArticipacoes S.A., a position he held until October 2018.

**Carlo Nardello**: Mr. Nardello is an Italian citizen, born in Rome, Italy, with a University Degree in Economics issued in 1988 by LUISS (Libera Università Internazionale degli Studi Sociali). Mr. Nardello has over 20 years of experience in the industry of broadcasting and communications. On January 7, 2019, he was appointed Chief Strategic Development & Transformation Officer at Telecom Italia S.p.A.. Between November 2016 through 2018 he was co-founder and CEO of CscVision, a consulting firm in media and marketing, as well as, starting from May 2017, Chief of Staff of the Special Commissioners of Alitalia (Italy s national airline). From May 2000 through November 2016 he held various offices at RAI Group (Rai Radiotelevisione Italiana S.p.A., Italy s public television and media company). Before that, he worked at Lego Company, The Walt Disney Company and Johnson and Johnson. Mr. Nardello is currently a Professor of Digital Marketing at La Sapienza University in Rome, Professor of Media Economics at LUMSA University in Rome, and he was also Professor of Marketing at UNISOB in Naples. He is the author of books on television marketing and in the digital market.

**Agostino Nuzzolo:** Mr. Nuzzolo was born in Caserta, Italy in 1968. He has been Head of TIM s Legal Affairs & Tax and General Counsel of TIM since January 2017, Secretary to the Board of Directors since February 2017 and interim Head of Human Resources and Organization since November 2017. Mr. Nuzzolo holds degree in Economics, cum laude, from the University of Bergamo, a law degree from the University of Milan and a graduate degree in Scienze della Sicurezza Economico-finanziaria from the University of Tor Vergata. In 2003, he obtained a Post-University Degree in Corporate Taxation, Scuola Polizia Tributaria Guardia di Finanza in cooperation with Bocconi University, Milan and admission to the bar (Italian Attorney).

From July 1986 until May 2006, he served as an officer cadet at the Military Academy of the Guardia di Finanza. During his career, he was in charge of managing and supervising daily activities and inspections in connection with combating tax and finance criminal activities as well as training of military cadets and other personnel in the Academy, assigned to both national and international units and operations. In his last appointment, he was served as Lieutenant Colonel, Head of Analysis and Studies within the Commanding General Office in Rome. He was also a member of the OECD commission (jointly Italy and US) in charge of verifying the effective implementation in Japan of the OECD Convention against Corruption (February-April 2006). From May 2006 to May 2008, he served as Tax Manager of Italcementi Group, directly reporting to the Administration & Control Director. From May 2008 to September 2014, he served as Legal, Tax and Compliance Director of Italcementi Group, directly reporting to the CEO. From February 2016 to June 2016, he held the office of HR, Organization and Information Technology Director (interim and in addition to the General Counsel position) of Italcementi Group, directly reporting to the CEO. From July 2016 to January 2017, Mr. Nuzzolo was General Counsel and Operational Director of Italmobiliare S.p.A., an investment holding company with the responsibility of coordinating all non-financial activities (legal, corporate affairs, tax, HR and general services). He also served as secretary to the Board. Mr. Nuzzolo was been an Adjunct Professor of International Taxation at the University of Bologna (School of Economics, Management and Statistics) from 2013 to 2016 and an adjunct professor in International Taxation at University of Roma Tre during the 2010-2011 academic year. Mr. Nuzzolo since April 2017 is member of the Board of Directors of INWIT.

**Piergiorgio Peluso:** Mr. Peluso was born in Rome, Italy in 1968. From September 26, 2012, he was Chief Financial Officer (CFO) and manager in charge of preparing corporate accounting documents of TIM S.p.A. From April 15, 2016 to December 17, 2017, he was Head of the Business Support Office of TIM S.p.A.. Since December 18, 2017, he has been Chief Transformation Officer (CTO) of TIM S.p.A. After graduating with a degree in Economics and Social Sciences at the Luigi Bocconi Commercial University in 1992, with a specialization in Finance, Peluso was an accountant at Arthur Andersen & Co until 1994. After a period at Mediobanca as Senior Financial Analyst between 1994 and 1998 and with Credit Suisse First Boston as Vice President of Financial Institutions Group from 1998 to 2000 and Mergers & Acquisitions Group (2000-2001), he became part of Medio Credito Centrale S.p.A. (Capitalia Group) in 2002 as Central Director. He held this position until 2005, when he was appointed Central Director of

Capitalia S.p.A. From 2007 to 2009, following the merger of Capitalia S.p.A. and UniCredit Group S.p.A., he was Head of Investment Banking Italia at UniCredit Group S.p.A. appointed Chief Executive Officer of UniCredit Corporate Banking S.p.A. In 2010, following the merger of UniCredit Corporate Banking S.p.A. with UniCredit S.p.A., he was appointed Head of Corporate & Investment Banking Italia, UniCredit Group. From 2011 to September 2012 he was Chief Executive Officer of Fondiaria SAI S.p.A. Peluso was a Director of Banco di Sicilia S.p.A., Edison S.p.A., Gemina S.p.A., Aeroporti di Roma S.p.A. and Milano Assicurazioni S.p.A. He currently holds the office of Director of lnwit S.p.A., of Flash Fiber Srl, of Telenergia Srl where he also holds the position of Chairman of the Board of Directors.

**Federico Rigoni:** Since June 2017, Federico Rigoni has been Ericsson s Head of Business for the South East Mediterranean. At the same time, he has held the position of President and CEO of Ericsson Telecommunications, as well as vice president of ASSTEL. Before these roles, he held a range of executive positions in sales at Ericsson. Mr. Rigoni has been working at Ericsson since 2010. Before this, he held a wide range of roles, both in sales and operations at Nokia Siemens Networks, Siemens Communications and ITALTEL. His previous position at Nokia Siemens Networks was Global Head of Sales for Telecom Italia Group, as well as CEO of Nokia Siemens Networks Italia. Rigoni is 52 years old and comes from Vicenza, Italy. He graduated in Electronic Telecommunications Engineering at the University of Padua. He has taken part in a wide range of executive courses at various universities, including Columbia University and the University of Pennsylvania.

**Elisabetta Romano:** Ms. Romano was born in Milan, Italy in 1963. Since July 1, 2018 she has been Chief Technology Officer of TIM. Ms. Romano has a Master of Computer Science of University of Salerno Fisciano, Campania and Executive Program Leadership of Columbia University New York, NY. She is an expert in technology in the telecommunications, IT and media sectors in Europe and the United States. She held various positions including EVP & GM, Packet Core & Identity Management Santa Clara, CA of Ericsson from June 2017 to June 2018. She was EVP & GM, Media Solutions at Ericsson from June 2016 to June 2017. She served as Vice President, Head of OSS & Service Enablement at Ericsson from June 2012 to June 2015. From March 2006 to December 2009 was Chair of Pride, a company belonging to the Ericsson group. In 2017 she was recognized as one of the top 50 women in technology by the National Diversity Council.

**Luciano Sale**: Mr. Sale was born in Macomer, Italy in 1961. Since February 5, 2019 he has become Chief of Human Resources & Organizational Development of TIM. He graduated in Sociology in Trento. After a brief experience as a researcher and training consultant, he started his professional career in January 1990 at Alenia Aerospazio, Aeronautics Division, as Training Manager of the Training activities. Between 1998 and 2001 he was at Wind Telecomunicazioni as Head of the Policies for the selection, management, development and training of the workforce. In 2001 he moved to IPSE2000 S.p.A. as Head of Human Resources Management and Development. In 2003 he returned to Wind as Vice President in charge of Personnel Management and Industrial Relations. After an experience as Human Resources Director at Poste Italiane, in June 2012 he was once again in Wind to take on the role of Vice President of Human Resources and Facilities Management. From December 2016 he was been the Human Resources Manager of the new Wind Tre Company, created as a result of the merger between Wind and Tre. He then was Alitalia s Human Resources Director from September 2017.

**Stefano Siragusa**: Mr. Siragusa was born in Feltre, Italy on 1976. His international managerial profile has allowed him to hold a series of leadership positions in multinational companies. In 2000, he joined Siemens AG as Product Manager in the Automation and Drives Division. In 2002, he began his career in BCG defining value-creation strategies in Europe, Asia-Pacific and particularly in North America where, as BCG Global talent, he transferred in 2005. Once back to Italy, in 2011 he was elected Partner & Managing Director of BCG and was appointed as leader of the industrial goods division. In 2012, he was also asked to coordinate Aerospace & Defence division in Europe and Middle East. In 2013, he was elected member of BCG s Global Operations Leadership Team and he decided to move to New York to be entrusted also with the responsibility of defining and coordinating BCG s global content agenda for Lean, Procurement and Supply Chain. In 2014, he returned to Italy to be nominated CEO and General Manager of Ansaldo STS, a public company listed on the Milan Stock Exchange (STS.IT) which delivers worldwide the most important mass transportation and urban railways projects. Under Siragusa s leadership, AnsaldoSTS experienced a superior value creation renaissance: new orders grew by 160%, cash generation by 90%, net results by 80% and productivity by 60%. Successfully finalized Ansaldo STS turnaround and its transition from Leonardo into Hitachi Group, in 2016 Siragusa decided to join Bain&Company, a global management-consulting firm with 55 offices in 36 countries, as Senior Partner and Director. Since 2017, Mr. Siragusa has been a Member of the Advisory Board of

LUMSA University. In 2016 Mr. Siragusa has supported the successful IPO of Enav, the public listed company that provides Air Traffic Control services, as member of the Board of Directors, Chairman of the Remuneration and Nomination Committee and member of the Risk and Related party committee. In 2015 and 2016, Mr. Siragusa has been Member of the Board of Directors and Member of the Governance Committee of Saipem, global leader in the Engineering & Construction and Drilling businesses. In 2015 and 2016 Mr. Siragusa was, also, Chairman of the Board of Metro 5 new Metro Systems in Milan. From 2015 to 2016, Mr. Siragusa was a Member of the Board of Directors of Marangoni, a global leader in the tire industry. Mr. Siragusa, born in 1976, graduated summa cum laude with a degree in Electrical Engineering from Politecnico di Milano. He successfully completed his education by obtaining an MBA cum laude from MIP and an Executive Master from Harvard Business School.

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In February 2016, the District Court of Milan issued an indictment against Mr. Piergiorgio Peluso and 11 other individuals in connection with an investigation stemming from the bankruptcy of Imco S.p.A. (**Imco**) in 2012. The principal allegation against Mr. Peluso is that, as CEO of UniCredit Corporate Banking S.p.A. (**UniCredit**) (the position he held before joining TIM in September 2012), he approved a complex restructuring transaction, which had, according to the allegation, the effect of decreasing the net asset value of Imco.

## 6.3 BOARD OF AUDITORS

On April 24, 2018, the Shareholders Meeting appointed the present Statutory Board of Auditors, that will remain in office until approval of the 2020 financial statements. Based on the slates submitted by the shareholders, five Acting auditors and four alternate Auditors have been appointed.

The Shareholders Meeting also appointed Auditor Roberto Capone as Chairman of the Board of Statutory Auditors.

The following table lists the members of the Telecom Italia Board of Statutory Auditors as of April 8, 2019.

| Name | Position | Appointed |
|---|---|---|
| Roberto CAPONE(1) | Chairman | 2015 |
| Giulia DE MARTINO | Acting Auditor | 2018 |
| Anna DORO(1) | Acting Auditor | 2018 |
| Marco FAZZINI | Acting Auditor | 2018 |
| Francesco SCHIAVONE PANNI | Acting Auditor | 2018 |
| Andrea BALELLI | Alternate Auditor | 2018 |
| Antonia COPPOLA | Alternate Auditor | 2018 |
| Franco DALLA SEGA(1) | Alternate Auditor | 2018 |
| Laura FIORDELISI(1) | Alternate Auditor | 2018 |

(1) Elected by minority shareholders.

The positions held by the members of the Board of Statutory Auditors in other listed companies are shown below:

| | |
|---|---|
| Marco Fazzini | Chairman of the Board of Auditors of ASTM S.p.A. and Poste Vita S.p.A. |
| Francesco Schiavone Panni | Chairman of the Board of Auditors of IMA S.p.A. |
| Giulia De Martino | Acting Auditor of Saipem S,p.A. |

For a detailed description of TIM s corporate governance, including activities and responsibilities of the Board of Auditors (acting as Audit Committee of the Company) and the mechanics for its appointment, see Item 10 Additional Information 10.1 Corporate Governance .

## 6.4 EXTERNAL AUDITORS

The TIM Shareholders Meeting, held on March 29, 2019, appointed Ernst & Young as TIM s independent auditors for the nine-year period 2019-2027, after the nine-year period 2010-2018 when such position was held by PricewaterhouseCoopers S.p.A., the sole auditor of the entire TIM Group.

The audit of Italian issuers (Public Interest Entities) is governed by legislative decrees on statutory audits of annual and consolidated accounts and, starting from January 1, 2017, by a new European regulation. Pursuant to such decrees and regulation, with the audit of TIM s 2018 separate and consolidated financial statements the PricewaterhouseCoopers audit mandate expired and could not be renewed until at least four financial years have elapsed from the date of termination of the previous assignment.

In accordance with the new legislative and regulatory framework, in 2017 TIM started, under the responsibility and supervision of its Board of Statutory Auditors, the selection process for the new Group Sole Auditor for the nine-year period from 2019 to 2027.

The Annual Shareholders Meeting of April 24, 2018 did not reach a quorum for the resolution on the conferral of the new audit engagement and therefore deferred this nomination to a subsequent Shareholders Meeting.

As a result, the Annual Shareholders Meeting of March 29, 2019, was called upon to resolve the conferral of the new audit engagement on the proposal of the Board of Auditors and to determine the relative fee for each year of the 2019-2027 period, as well as the criteria for the related adjustment.

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**Item 6. Directors, Senior Management and Employees** **Employees**

## 6.5 EMPLOYEES

### 6.5.1 Employees and Changes in the TIM Group

The number of Group employees at December 31, 2018 and 2017 was the following:

| | As of December 31, 2018 | 2017 (units) | Changes |
|---|---|---|---|
| Employees Italy | 48,005 | 49,689 | (1,684) |
| Employees Foreign | 9,896 | 9,740 | 156 |
| **Total Employees at payroll** | **57,901** | **59,429** | **(1,528)** |

The decrease in workforce (excluding employees with temporary work contracts) of 1,528 units compared to December 31, 2017, is the result of the workforce turnover in 2018. In detail:

| | Hirings | Terminations (units) | Changes |
|---|---|---|---|
| Domestic | 547 | 2,198 | (1,651) |
| Brazil | 2,563 | 2,413 | 150 |
| Other Operations | 33 | 60 | (27) |
| **Turnover** | **3,143** | **4,671** | **(1,528)** |

***TIM S.p.A.***

| | As of December 31, 2018 | 2017 (units) | Changes |
|---|---|---|---|
| Personnel on payroll | 42,656 | 44,281 | (1,625) |

***Tim Brasil group***

| | As of December 31, 2018 | 2017 (units) | Changes |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Tim Brasil group Total | 9,658 | 9,508 | 150 |

For further information on employees, please see Note Employee benefits expenses of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

### 6.5.2 INDUSTRIAL RELATIONS

**TIM S.p.A. The Industrial Relations model**

TIM has developed its industrial relations model over time to be geared towards ensuring constant dialogue and constructive engagement aimed at promoting the appropriate participation of trade union representatives and organizations.

The structure of TIM s current industrial relations model, formalized with the trade unions in the Protocol of June 23, 2016, is aimed at enhancing collaboration on matters required by law and collective bargaining, in the areas of information, consultation and negotiation, both at national and regional level.

At a local level, there is a widespread presence of trade union representatives in all the Italian regions, which fosters an active decentralized participation allowing the specific regional needs and opportunities to be better understood and combined by both parties. Today, 450 TIM employees hold the office of trade union representative. TIM recognizes specific prerogatives defined by company agreements in force at the time for union representatives in the Company, in addition to the protections and rights provided by law and the TLC national labor agreement.

Due to the organizational complexity and multi-regional presence, trade union representatives elected a national representative body (in line with the Consolidated Law on Representation January 10, 2014) called the National Trade Union Representatives Coordinator, delegated to manage negotiations with the Company for matters of a national nature.

The industrial relations system is set up with a focus on preventive phases of information and union discussions, also through specific corporate bodies (in the form of permanent joint commissions*)* with the task of the technical development of specific subjects such as training and occupational health and safety.

This system is based on a widespread knowledge of the Company s strategies, as well as a particular focus on the protection of collective interests and the professional development of workers, enhancing the dialogue that takes place both nationally and locally.

**The 2018-2020 Business Plan and the application agreements for the 2019-2020 two-year period**

The framework described above has allowed agreements to be reached for the implementation of efficiency improvement plans that can mediate between the needs of the workers and those of the Company. For example, a complex negotiation process involving the leading trade union organizations was completed in late 2015 with the signing of a framework agreement to manage staff redundancies. Like its predecessors, the agreement provided for the use of a *mixture* of integrated instruments and measures that are not socially traumatic but that are economically sustainable, including the use in 2016-2017 of Defensive Solidarity Contracts, as required by the *Jobs Act*, combined with the strategic role of the training lever, as a pivotal element to encourage professional retraining and re-qualification in order to counteract redundancies. Defensive Solidarity Contracts are agreements that provide for working hours to be reduced in order to avoid downsizing. For the workers to whom the contract will be applied, provision is made for INPS (Istituto Nazionale della Previdenza Sociale) to make up part of the remuneration not received due to the reduction in working hours.

The 2018-2020 Business Plan management agreement provided that at the end of the Defensive Solidarity Contracts two-year period the parties would define as indicated in the framework agreement plan a subsequent agreement to also ensure occupational protection for the 2018 financial year, through a Solidarity Contract with a duration of 12 months. Having noted the impossibility of implementing the planned programme, TIM had to identify new solutions to support the objectives of the 2018-2020 Business Plan.

In this framework negotiations took place with the National Trade Union Representatives Coordinator and the trade unions for the national labor agreement, launched January 2018 and in line with the 2018-2020 Business Plan and related employment measures, in an attempt to identify a balanced and timely solution to meet business needs and objectives.

The negotiations took place over numerous sessions where TIM put forward its proposal based on a plan to make around 6,500 staff reductions without forced redundancies and the recruitment of about 2,000 young people. This proposal was not agreed by the union.

In March 2018, negotiations reopened and TIM further outlined its operating market scenario, the sector trends and the guidelines of the 2018-2020 Business Plan, approved by the BoD in March 2018, detailing the guidelines and programs in place to take better advantage of business opportunities, as well as the plan s organizational repercussions and consequent effects on employment levels. The Company has therefore put forward new proposals in the hope of identifying shared solutions for plan management but this attempt to reach shared and sustainable solutions has not been agreed upon by the trade unions either.

The agreement of June 2018 concludes its complex path, as part of the joint examination sessions pursuant to Art. 24 of Legislative Decree No. 148/2015, with the signing of an agreement with the Ministry of labor and Social Policy, which has defined a series of measures and actions to support the pursuit of business objectives and management of the 4,500 announced redundancies and connected to the 2018-2020 Business Plan, approved in March 2018, through unforced and socially sustainable methods.

In summary, in the signed agreements framework, the parties have agreed to:

- the application of the Defensive Solidarity Contract, affecting about 30,000 TIM people; The contract provides for a vertical reduction of working hours of 10%, out of a total of 26 days over 12 months, distributed on a predefined calendar, starting in June 2018;
- the confirmed early retirements under the agreement of October 2015 pursuant to Art. 4 of law No. 92/2018 planned for the year 2018, while for the two-year period 2019-2020 a new agreement is expected for a further 4,000 early retirements;
- the shared intention to begin negotiations on specific issues such as the performance bonus, holidays and second level bargaining, aimed at safeguarding the company s competitive ability, improving labor productivity and operating efficiency, in the context of people development; and
- the opportunity to relaunch industrial relations, with a path of negotiations, which take on a central importance in the process of radically changing the Group s organizational, productive and competitive conditions.

In line with the commitments referred to in the agreements of June 2018:

- a specific agreement on performance bonuses was signed in July 2018, which reconfigures the mechanisms for providing the EBITDA indicator value in line for that defined for management by objectives (MBOs) for senior management for the remaining duration of the agreement. The threshold set for EBITDA (weighted at 40%) is 95% with a return of 70% on the value of the perfomance bonus;
- negotiations on Industrial Relations and second bargaining levels have been launched.

**Work-life agreements**

- In September 2018, the Company and trade union signed specific agreements, aimed at facilitating working methods for 700 TIM employees in Genoa and the province, following the collapse of the Morandi bridge. In particular, the memorandum of understanding provides for the adoption of temporary extraordinary measures to reduce the inconvenience for employees both for travel between home and work, and that related to carrying out their professional activities, with the intention to assist with the state of emergency in the city.
- For staff in Rome and Bari, cities with particular interests in the company office rationalization project, an agreement was reached to extend the number of agile working days at home agreement for 2018, to facilitate the

work-life balance.

· In 2018, TIM employees were able to choose to take advantage of a days of paid leave in lieu of the economic payment contractually agreed for the November 4 bank holiday. This opportunity, also aimed at promoting work-life balance, was shared in agreement with the trade unions. At local level, similar agreements were signed for the local patron saint holidays falling on Sundays in 2018.

**Senior Management Staff**

In February 2018 an agreement was signed with the senior management staff trade union representative, which will allow for a resignation incentive, through a mix of new and socially sustainable instruments, such as Art. 4 of Law 92/2012, to ensure efficiency targets over the period are met (100 Executives in the TIM, Olivetti, INWIT, HRS, Sparkle, Telecontact Centre and TI Trust Technologies areas). The agreement also provides, in line with the legislative changes on the subject, a welfare plan for the Group s senior management for the two-year 2018-2019 period.

**In Brazil**

In 2018, TIM Participações held two meetings with national federations that together represent the country to negotiate the renewal of the 2018/2019 Profit Sharing Plan. In addition, the renewal of the 2018/2020 Collective labor Contract was also addressed, which included, among other things, new clauses for 20-day paternity leave, a holiday for call center operators and the possibility for women to return early from maternity leave in certain circumstances.

## 6.6 COMPENSATION OF DIRECTORS, OFFICERS AND MEMBERS OF THE BOARD OF AUDITORS

### 6.6.1 Compensation of Directors

The General Shareholders Meeting held on May 4, 2018 set the maximum total annual remuneration for the Board of Directors, which will remain in office until the approval of the 2020 financial statements, at 2.2 million euros, in accordance with article 2389, first paragraph, of the Italian Civil Code. This amount is to be divided amongst the directors in accordance with the resolutions adopted by the Board itself on this point.

The above mentioned overall amount is distributed as follows (gross amounts on a yearly basis):

- 100,000 euros to be paid to each director in office (excluding the Chairman of the Board and the CEO);
- an additional 45,000 euros to be paid to each member of the Control and Risk Committee;
- an additional 40,000 euros to be paid to each member of the Nomination and Remuneration Committee;
- an additional 20,000 euros to be paid to the Chair of each of the Control and Risk Committee and Nomination and the Nomination and Remuneration Committee;
- an additional 25,000 euros to be paid to each member of the Related Parties Committee;
- an additional 15,000 euros to be paid to the Chair of the Related Parties Committee;
- an additional 25,000 euros to be paid to each member of the Strategic Committee (other than the Chair of the Board of Directors and the CEO).

The total compensation paid by TIM and by the TIM Group subsidiaries in 2018 to the members of the Board of Directors of TIM was 4.2 million euros.

**EXECUTIVE CHAIRMAN (Arnaud de Puyfontaine)**

**January 1 April 24, 2018**

The position of Executive Chairman was held by Arnaud Roy de Puyfontaine from the beginning of the year to April 24, 2018. During the Board of Directors meeting held on March 22, 2018, the Executive Chairman resigned from office. This resignation came into effect as of April 24, 2018.

During the period, his remuneration was represented by the emolument provided for under Article 2389, paragraph 3, of the Italian Civil Code, consisting of a fixed component of 900,000 euro gross per annum, and a variable component in the form of an MBO totaling, at target, 900,000 euro gross per annum, not including remuneration as a member of the Board of Directors and of the Strategy Committee.

The Executive Chairman did not receive any variable short-term remuneration.

**CHAIRMAN (Fulvio Conti)**

**May 7 December 31, 2018**

TIM s Board of Directors meeting, held on May 7, 2018 following the renewal decided by the Shareholders Meeting of May 4, appointed Fulvio Conti as Chairman of the Company.

The Chairman was only granted the powers provided for by law, the Articles of Association and the Company s corporate governance documents.

Below please find the description of the Chairman s compensation package decided by the Board of Directors on July 24, 2018 and on February 20, 2019:

(1) A fixed emolument, established on an annual basis, of 600,000 euro gross per annum. The Chairman does not receive any remuneration as a Director, or as member of the Strategy Committee (pursuant to Article 2389, paragraph 1, of the Italian Civil Code).

(2) End-of-office payment of either nil or 400,000 euro gross, subject to the Chairman s performance. Therefore, the bonus will be paid if the office effectiveness evaluation in the Board Review results in a score of at least 4 on a scale of 1 to 5 for each of the years 2019 and 2020. In any other case, the bonus will not be paid.

(3) No benefits (only reimbursement of expenses incurred for the purposes of office, as established by the Articles of Association), no clawback, and no severance pay.

The Board of Directors meeting of November 13, 2018, following the Director Amos Genish ceasing the role of Chief Executive Officer, assigned all powers to the Chairman of the Board of Directors who exercised them until the next Board of Directors meeting of 18 November (which appointed Director Luigi Gubitosi as Chief Executive Officer).

No additional remuneration was paid for the aforementioned temporarily held powers.

**EXECUTIVE DEPUTY CHAIRMAN (Giuseppe Recchi)**

**January 1 March 22, 2018**

TIM s Board of Directors meeting held on March 22, 2018, acknowledged the resignation of the Executive Deputy Chairman (and Chairman of the Strategy Committee), Giuseppe Recchi, with immediate effect.

During the period, his remuneration (in addition to that received for the office of Director and/or member of Committees) totaled 45,000 euro gross per annum.

The Vice Executive Chairman did not receive any variable short-term remuneration.

Given the Executive Deputy Chairman was temporarily assigned organizational responsibility for the Security Department and responsibility for the governance of the wholly owned subsidiary Telecom Italia Sparkle S.p.A., he was paid an additional fee of 2017 10,000 euro gross per month, until his remuneration could be completely reviewed, that is, upon implementation of the governance arrangements designed to meet the requirements of the Golden Power rules. This temporary period remained valid until the appointment was terminated.

**DEPUTY CHAIRMAN (Franco Bernabè)**

**March 22 May 4, 2018**

TIM s Board of Directors meeting held on March 22, 2018, having acknowledged the resignation of the Executive Deputy Chairman Giuseppe Recchi, with regard to the powers over the Security Department and over the Companies operations and assets of importance for national security and defense, appointed Franco Bernabè (already a member of the Strategic Committee) as Managing Director with similar responsibilities regarding company security. The role of Vice Chairman was conferred on him, with the responsibilities set out in law and statute.

No additional fixed and variable remuneration was acknowledged for the post of Deputy Chairman. As indicated in the table below for period January 1, 18 May 4, 2018 his remuneration was that of Director and member of the Strategic Committee.

**CHIEF EXECUTIVE OFFICER (Amos Genish)**

**January 1 November 13, 2018 (as Management)**

**January 1 November 14, 2018 (as Employee)**

During the period, Mr. Genish s gross salary as the Company s General Manager, amounted to 1,000,000 euro gross per annum, while his remuneration as Chief Executive Officer, pursuant to Article 2389, paragraph 3, of the Italian Civil Code, was fixed (confirmed downstream of renewal of the Board of Directors by the Shareholders Meeting of May 4, 2018) at 400,000 euro gross per annum, exclusive of his remuneration for the position of Director and for his membership on the Strategy Committee. Furthermore, as remuneration pursuant to Article 2389, paragraph 3, of the Italian Civil Code, he was assigned an MBO totaling, at target, 1,400,000 euros per annum, gross.

Given certain TIM metrics (EBITDA threshold) were not reached, the MBO measure for 2018 was cancelled.

In implementing the present individual contract between Mr. Genish and the Company, and following the launch of the Long-term Incentive Plan 2018-2020, decided by the Board of Directors at its meeting held on July 24, 2018, Mr. Genish was assigned the right to receive 16,666,667 TIM S.p.A ordinary shares, at target, for the two years 2019-2010. Depending on the degree to which performance targets for the three-year period 2018-2020 are met, this number may be reduced or may be raised up to a maximum of 26,666,667 shares.

On November 13, 2018, the Board of Directors of TIM revoked all attributions granted to the director Amos Genish and appointed the Chairman Fulvio Conti to finalize the activities relating to the termination of the employee relationship, which came into effect as of November 14, 2018.

For termination of his employment, Mr. Genish was paid the final additional amounts due and the severance pay due under law and national labor agreement (severance pay, holiday pay, thirteenth month payments) and, for the office held, a fixed sum to cover the costs of housing, schooling, transport and travel, as agreed in his individual contract with the Company, as reported in last year s Remuneration Report.

Mr Genish is not due any amount as an MBO (as above), nor for the Long-term Incentive 2018-2020 (as per Plan Regulation).

**CHIEF EXECUTIVE OFFICER (Luigi Gubitosi)**

**November 18 December 31, 2018**

The Company s Board of Directors, at its meeting held on November 18, 2018, appointed Luigi Gubitosi as Chief Executive Officer, and at the same time hired him as a manager on a permanent employment contract, appointing him General Manager.

During the period, gross remuneration for his employment by the Company amounts to 1,000,000 per annum, gross, and a fixed sum of 400,000 euros per annum, gross, was awarded to him as remuneration pursuant to Article 2389, subsection 3, of the Italian Civil Code (excluding remuneration for serving as a Director, pursuant to Article 2389, subsection 1, of the Italian Civil Code, and for membership of the Strategy Committee). For the same purpose, he was also awarded an MBO with a target amount 1,400,000 euros gross for 2019.

As part of the Long-term Incentive 2018-2020 Plan, Mr Gubitosi was attributed for the 2019-2020 period the right to receive 10,980,392 ordinary TIM S.p.A. shares free of charge at target level. Depending on the degree to which performance targets for the three-year period 2018-2020 are met, this number may be reduced or may be raised up to a maximum of 19,215,686 shares.

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**n 6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud**

The following table lists the Directors who served during 2018 and their respective compensation as of December 31, 2018, according to the disclosure format set forth by Consob, the Italian market regulator (Regulation for the implementation of Legislative Decree dated February 24, 1998, adopted by Consob under Resolution 11971 dated May, 14, 1999 and subsequent amendments and additions):

| Notes | Name and surname | Position | Period for which the position was held | Expiry of term of office (mounth/ year) | Column 1 Fixed remuneration | Column 2 Remuneration for involvement in committees | Column 3 Variable non-equity remuneration: Bonuses and other incentives | Column 3 Variable non-equity remuneration: Profit sharing | Column 4 Non-monetary benefits | Column 5 Other remuneration | Column 6 Total | Column 7 Fair Value of equity remuneration | Column 8 Compensation for loss of office or termination of employment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (thousands of euros) | | | | | | | | |
| | **Current Board of Directors** | | | | | | | | | | | | |
| 1 | Fulvio Conti | Chairman | 5/7 12/31/2018 | Dec-20 | 392 | | | | | | 392 | | |
| 2 | Luigi Gubitosi | Chief Executive Officer | 11/18 12/31/2018 | Dec-20 | | | | | | | | | |
| | | General Manager | | | 168 | | | | | | 168 | | |
| 3 | Amos Genish | Chief Executive Officer | 07/05 11/13/2018 | Dec-20 | 1,065 | | 112 | | 30 | | 1,207 | | |
| | | General Manager | 01/01 11/14/2018 | | | | | | | | | | |
| 4 | Luigi Gubitosi | Director | 05/04 11/17/2018 | Dec-20 | 54 | 35 | | | | | 89 | | |
| 5 | Amos Genish | Director | 01/01 | Dec-20 | 16 | | | | | | 16 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/31/2018 | | | | | | | | |
| 6 | Alfredo Altavilla | Director | 05/04 12/31/2018 | Dec-20 | 66 | 37 | | | | | 103 |
| 7 | Paola Bonomo | Director | 05/04 12/31/2018 | Dec-20 | 66 | 25 | | | | | 91 |
| 8 | Giuseppina Capaldo | Director | 05/04 12/31/2018 | Dec-20 | 66 | 37 | | | | | 103 |
| 9 | Maria Elena Cappello | Director | 05/04 12/31/2018 | Dec-20 | 66 | 16 | | | | | 82 |
| 10 | Massimo Ferrari | Director | 05/04 12/31/2018 | Dec-20 | 66 | 44 | | | | | 110 |
| 11 | Paola Giannotti | Director | 05/04 12/31/2018 | Dec-20 | 66 | 41 | | | | | 107 |
| 12 | Marella Moretti | Director | 05/04 12/31/2018 | Dec-20 | 66 | 41 | | | | | 107 |
| 13 | Lucia Morselli | Director | 05/04 12/31/2018 | Dec-20 | 66 | 28 | | | | | 94 |
| 14 | Dante Roscini | Director | 05/04 12/31/2018 | Dec-20 | 66 | 16 | | | | | 82 |
| 15 | Arnaud Roy de Puyfontaine | Director | 05/04 12/31/2018 | Dec-20 | 66 | 16 | | | | | 82 |
| 16 | Rocco Sabelli | Director | 05/04 12/31/2018 | Dec-20 | 66 | 41 | | | | | 107 |
| 17 | Michele Valensise | Director | 05/04 12/31/2018 | Dec-20 | 66 | 48 | | | | | 114 |
| | | | | | **2,487** | **425** | **112** | **0** | **30** | **0** | **3,054** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Total Current Board of Directors** | | | | | | | | | |
| | **Previous Board of Directors** | | | | | | | | | |
| 18 | Arnaud Roy de Puyfontaine | Executive Chairman | 01/01 04/24/2018 | Dec-19 | 288 | | | | | 288 |
| 19 | Giuseppe Recchi | Executive Deputy Chairman | 01/01 03/22/2018 | Dec-19 | 38 | | | | | 38 |
| 20 | Amos Genish | Chief Executive Officer | 01/01 04/24/2018 | Dec-19 | 128 | | | | | 128 |
| 21 | Giuseppe Recchi | Director | 01/01 03/22/2018 | Dec-19 | 25 | 9 | | | 13 | 47 |
| 22 | Camilla Antonini | Director | 01/01 04/24/2018 | Dec-19 | 35 | 14 | | | | 49 |

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**n 6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud**

| Notes | Name and surname | Position | Period for which the position was held | Expiry of term of office (mounth/ year) | Column 1 Fixed remuneration | Column 2 Remuneration for involvement in committees | Column 3 Variable non-equity remuneration Bonuses and other incentives | Column 3 Profit sharing | Column 4 Non-monetary benefits | Column 5 Other remuneration | Column 6 Total | Column 7 Fair Value of equity remuneration | Column 8 Compensation for loss of office or termination of employment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | (thousands of euros) | | | | | |
| 23 | Franco Bernabè | Director | 01/01 05/04/2018 | Dec-19 | 38 | 9 | | | | | 47 | | |
| 24 | Ferruccio Borsani | Director | 01/01 05/04/2018 | Dec-19 | 38 | 14 | | | | | 52 | | |
| 25 | Francesca Cornelli | Director | 01/01 05/04/2018 | Dec-19 | 38 | 15 | | | | | 53 | | |
| 26 | Lucia Calvosa | Director | 01/01 05/04/2018 | Dec-19 | 53 | 22 | | | | | 75 | | |
| 27 | Frédèric Crépin | Director | 01/01 04/24/2018 | Dec-19 | 35 | 21 | | | | | 56 | | |
| 28 | Dario Frigerio | Director | 01/01 05/04/2018 | Dec-19 | 38 | 9 | | | | | 47 | | |
| 29 | Felicité Herzog | Director | 01/01 04/24/2018 | Dec-19 | 35 | 14 | | | | | 49 | | |
| 30 | Anna Jones | Director | 01/01 04/24/2018 | Dec-19 | 35 | 19 | | | | | 54 | | |
| 31 | | Director | 01/01 | Dec-19 | 35 | 14 | | | | | 49 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Marella Moretti | | 04/24/2018 | | | | | | | | |
| 32 | Hervé Philippe | Director | 01/01 04/24/2018 | Dec-19 | 35 | 13 | | | | | 48 |
| 33 | Danilo Vivarelli | Director | 01/01 05/04/2018 | Dec-19 | 38 | 14 | | | | | 52 |
| | **Total Previous Board of Directors** | | | | **932** | **187** | | | | **13** | **1,132** |
| | **Total** | | | | **3,419** | **612** | **112** | | **30** | **13** | **4,186** |

(1) **Fulvio Conti Chairman**
col. 1 The amount refers to the fixed remunerations pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Chairman for the period 05/07-12/31/2018. The Chairman does not receive any remuneration as a Director or as member of the Strategy Committee (pursuant to Article 2389, paragraph 1, of the Italian Civil Code).

(2) **Luigi Gubitosi Chief Executive Officer and General Manager**
col. 1 The amount includes the remuneration as employee ( /000 119) for the period in which he held the position of General Manager 11/18-12/31/2018 and the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code ( /000 49) for the period he held the position of Chief Executive Officer 11/18-12/31/2018. The Chief Executive Officer does not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(3) **Amos Genish Chief Executive Officer and General Manager**
col. 1 The amount includes the remuneration as employee ( /000 859) for the period in which he held the position of General Manager 01/01-11/14/2018 and the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code ( /000 206) for the period he held the position of Chief Executive Officer 05/07-11/13/2018. In the period in which he held the role, the Chief Executive Officer did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

col. 3 The lump sum bonus was paid to cover housing, school, transport, travel expenses, implementing what was agreed in his individual agreement with the company.

(4) **Luigi Gubitosi Director**
col. 1 The amount refers to remuneration received as Director for the period 05/04-11/17/2018.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-11/17/2018 ( /000 12) and as member of the Control and Risk Committee for the period 05/16-11/17/2018 ( /000 23).

(5) **Amos Genish Director**
col. 1 The amount refers to the remuneration received as Director for the period 04/25-05/03/2018 ( /000 2) and for the period 11/14-12/31/2018 ( /000 14).

(6) **Alfredo Altavilla Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018( /000 25) and as President of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 ( /000 12).

(7) **Paola Bonomo Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018( /000 25).

(8) **Giuseppina Capaldo Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018 ( /000 16) and as member of the Nomination and Remuneration Committee for the period 06/25-12/31/2018 ( /000 21).

(9) **Maria Elena Cappello Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018.

(10) **Massimo Ferrari Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-12/31/2018 ( /000 16) and as member of the Control and Risk Committee for the period 05/16-12/31/2018 ( /000 28).

(11) **Paola Giannotti Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risk Committee for the period 05/16-12/31/2018 ( /000 28) and as President of the Control and Risk Committee for the period 05/16-12/31/2018 ( /000 13).

(12) **Marella Moretti Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risk Committee for the period 05/16-12/31/2018 ( /000 28) and as member of the Related Parties Committee for the period 06/25-12/31/2018 ( /000 13).

(13) **Lucia Morselli Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018 ( /000 16) and as Chairman of the Related Parties Committee for the period 05/16-12/31/2018 ( /000 10) and as member of the Control and Risk Committee for the period 12/06-12/31/2018 ( /000 2).

(14) **Dante Roscini Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Related Parties Committee for the period 05/16-12/31/2018.

(15) **Arnaud Roy de Puyfontaine Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 05/16-12/31/2018.

(16) **Rocco Sabelli Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee for the period 16/05-31/12/2018 ( /000 16) and as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 ( /000 25).

(17) **Michele Valensise Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee for the period 05/16-12/31/2018 ( /000 25) and as member of the Control and Risks Committee for the period 06/25-12/31/2018 ( /000 23).

(18) **Arnaud Roy de Puyfontaine Executive Chairman**

col. 1 The amount refers to the fixed remuneration pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Executive Chairman for the period 01/01-04/24/2018. In the period in which he fulfilled the role, the Executive Chairman did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(19) **Giuseppe Recchi Deputy Executive Chairman**
col. 1 The amount includes the fixed remuneration pursuant to Art. 2389 paragraph 3 Italian Civil Code received for the office of Deputy Executive Chairman ( /000 10) and the additional remuneration acknowledged for the organizational responsibility of the Security Function ( /000 28) for the period 01/01-03/22/2018.

(20) **Amos Genish Chief Executive Officer and General Manager**
col. 1 The amount refers to the fixed remuneration pursuant to Art. 2389 paragraph 3 of the Italian Civil Code received for the position of Chief Executive Officer for the period 01/01 04/24/2018. In the period in which he fulfilled the role, the Chief Executive Officer did not receive remuneration for the office of Director or for his membership of the Strategy Committee (pursuant to Art. 2389, subsection 1 of the Italian Civil Code).

(21) **Giuseppe Recchi Director**
col. 1 The amount refers to remuneration received as Director ( /000 25) for the period 01/01-03/22/2018.

col. 2 The amount refers to remuneration received as Chairman of the Strategic Committee ( /000 3) and member of the Strategic Committee ( /000 6) for the period 01/01-03/22/2018.

col. 5 The amount refers to remuneration pursuant to Art. 2389 paragraph 1 Italian Civil Code received as Director of INWIT S.p.A. for the period 01/01-04/12/2018.

(22) **Camilla Antonini Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(23) **Franco Bernabè Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee.

(24) **Ferruccio Borsani Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

(25) **Francesca Cornelli  Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(26) **Lucia Calvosa  Director**
col. 1 The amount refers to remuneration received as Board Director (  /000 38) and Director with functions as link between the Board of Directors and the company control structures which report hierarchically to the Board of Directors (  /000 15).

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee (  /000 15) and as Chairman of the Control and Risks Committee for the period (  /000 7).

(27) **Frédéric Crépin  Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee (  /000 8) and member of the Nomination and Remuneration Committee (  /000 13).

(28) **Dario Frigerio  Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Strategic Committee.

(29) **Félicité Herzog  Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(30) **Anna Jones  Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nominations and Remunerations Committee (  /000 13) and as Chairman of the Nomination and Remuneration Committee (  /000 6).

**n 6. Directors, Senior Management and Employees Compensation Of Directors, Officers And Members of The Board of Aud**

(31) **Marella Moretti Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Control and Risks Committee.

(32) **Hervé Philippe Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

(33) **Danilo Vivarelli Director**
col. 1 The amount refers to the remuneration received as Board Director.

col. 2 The amount refers to remuneration received as member of the Nomination and Remuneration Committee.

### 6.6.2 Compensation of Executive Officers

The total compensation due to the Company s executive officers by the Company or by any of the Company s subsidiaries in 2018 (including the Chief Executive Officer, Executive Chairman and the Deputy Executive Chairman) was 14.0 million euros.

In case of severance, the settlement set out in law, in the Collective Employment Agreement and in supplementary company agreement apply.

There are no general non-competition policies for executive officers with strategic responsibilities.

Applicable Italian law requires disclosure of individual compensation in the form of stock options for General Managers and, in the aggregate and divided by plan, the stock options granted by TIM S.p.A. to Executive Officers as a group.

The specific provisions and the information relating to the current Chief Executive Officer, who is an employee of the Company, are described under 6.6.1 Compensation of Directors .

The following tables have been prepared according to the format required by the Regulation for the implementation of Legislative Decree dated February 24, 1998, adopted by Consob under Resolution 11971 dated May 14, 1999 and subsequent amendments and additions.

| | Options assigned in previous financial years | Options assigned | Options exercised | Options expired | Options held at | Opt f |
|---|---|---|---|---|---|---|

| | | | | | | during the financial year | | | | | | during the financial year | | | during the financial year | the end of the financial year | th Ye |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Position | Plan and respective resolution | Number of financial instruments | Strike price | | Possible exercise period (from to) | Number of financial instruments | Strike price | Possible exercise period (from to) | Fair value | Date of assignment | Market price | Number of financial instruments | Strike price | Market price | Number of financial instruments | Number of financial instruments | Fair |
| *emuneration in the company that draws up the financial tatements* | | | | | | | | | | | | | | | | | |
| xecutive fficers | 2014 Stock Option Plan 4/16/2014 | 1,704,571 | 0.94<br>1.15 | 1.01 | 2017/2020 | | | | | | | | | | 627,445(1) | 1,077,126 | |
| *emuneration from subsidiaries and associates* | | | | | | | | | | | | | | | | | |
| xecutive fficers | 2016 Stock Option Plan | 632,184 | R$ | 8.0977(2) | 2017/2022 | | | | | | | | | | 632,184(3) | | |

(1) Balance between those options held at the time of sale, and those held at the time of entering/exiting the category of Key Managers with Strategic Responsibilities.

(2) The price exercised may be corrected based on conditions established in the plan.

(3) Options are acknowledged in cash based on the spread between the exercise price and the average value of shares ON TIMP3, weighted for the volume negotiated, in the negotiation sessions of the 30 days prior to the transfer date.

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### 6.6.3 COMPENSATION OF MEMBERS OF THE BOARD OF AUDITORS

The General Shareholders Meeting of April 24, 2018 (which appointed the current Board of Auditors) authorized annual compensation of 95,000 euros for each Auditor and 135,000 euros for the Chairman of the Board of Auditors. Such compensation took into account the role of Board of Statutory Auditors acting as Supervisory Panel established under Legislative Decree 231/2001.

The total compensation paid by the Company or by any of the TIM Group subsidiaries in 2018 to the members of the Board of Auditors was approximately 520 thousand euros.

| **Individuals** | **Description of the position** | | | **Compensation (thousands of euros)** | | | | |
|---|---|---|---|---|---|---|---|---|
| **Name** | **Position held** | **Period during which position was held** | **Office expiry** | **Compensation base** | **Non cash benefits** | **Bonuses and other incentives** | **Other Compensations** | **Total** |
| Roberto CAPONE(1) | Chairman | 1/1-12/31/2018 | 12/31/2020 | 136 | | | | 136 |
| Giulia DE MARTINO(2) | Acting Auditor | 4/24-12/31/2018 | 12/31/2020 | 65 | | | | 65 |
| Anna DORO(3) | Acting Auditor | 4/24-12/31/2018 | 12/31/2020 | 65 | | | | 65 |
| Marco Fazzini(4) | Acting Auditor | 4/24-12/31/2018 | 12/31/2020 | 65 | | | | 65 |
| Francesco SCHIAVONE PANNI(5) | Acting Auditor | 4/24-12/31/2018 | 12/31/2020 | 65 | | | | 65 |
| Vincenzo CARIELLO(6) | Acting Auditor | 1/1-4/24/2018 | 12/31/2017 | 31 | | | | 31 |
| Gabriella CHERSICLA(7) | Acting Auditor | 1/1-4/24/2018 | 12/31/2017 | 31 | | | | 31 |
| Gianluca PONZELLINI(8) | Acting Auditor | 1/1-4/24/2018 | 12/31/2017 | 31 | | | | 31 |
| Ugo ROCK(9) | Acting Auditor | 1/1-4/24/2018 | 12/31/2017 | 31 | | | | 31 |
| **Total** | | | | **520** | | | | **520** |

(1) **Roberto Capone Chairman of the Board of Statutory Auditors**
This amount refers to the compensation received as Chairman of the Board of Statutory Auditors.

(2) **Giulia De Martino Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

(3) **Anna Doro Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

(4) **Marco Fazzini Acting Auditor**
This amount refers to the compensation received as Acting Auditor

(5) **Francesco Schiavone Panni Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

(6) **Vincenzo Cariello Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

(7) **Gabriella Chersicla Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

(8) **Gianluca Ponzellini Acting Auditor**
This amount refers to the compensation received as Acting Auditor

(9) **Ugo Rock Acting Auditor**
This amount refers to the compensation received as Acting Auditor.

## 6.7 OPTIONS TO PURCHASE SECURITIES FROM REGISTRANT

Equity compensation plans in place at December 31, 2018 are used for retention purposes and to offer long-term incentives to Group managers and personnel.

For a summary of the plans in place at December 31, 2018, please see Note Equity Compensation Plans of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

## Item 7. MAJOR SHAREHOLDERS AND RELATED-PARTY TRANSACTIONS

### 7.1 MAJOR SHAREHOLDERS

At December 31, 2018, according to the shareholders register and other information in the Company s possession, the parties which held ordinary shares, directly or indirectly, in excess of 3% of the ordinary share capital of TIM were the following

| | | As of December 31, 2018 | |
|---|---|---|---|
| **Major Shareholders** | **Type of ownership** | **No. Ordinary Shares** | **% of ordinary share capital** |
| Vivendi S.A. | (direct) | 3,640,109,990 | 23.94 |
| Paul E. Singer | (indirect) | 1,345,124,573 | 8.85(*) |
| Cassa Depositi e Prestiti S.p.A | (direct) | 750,000,000 | 4.93(**) |

(*) Paul E. Singer is General Partner of Elliott Capital Advisors LP. The indirect shareholding is held through the controlled companies Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership. Following communications received for participation in the Telecom Italia Shareholders Meeting of April 24, 2018, the shareholding increased to 9.19% of the ordinary share capital. At the Shareholders Meeting of May 4, 2018, Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership participated with a number of shares equal to 8.27% of the ordinary share capital.

(**) Shareholding registered for the TIM Shareholders Meeting of May 4, 2018. On April 11, 2018 Cassa Depositi e Prestiti S.p.A. disclosed a shareholding to Consob and the Company equal to 4.26% of the ordinary share capital.

At December 31, 2018, TIM held 37,672,014 of its own Ordinary Shares, while the subsidiary Telecom Italia Finance S.A. held another 126,082,374 Ordinary Shares, for a total of 1.08% of capital with voting rights.

As of April 8, 2019, the above mentioned position was the following:

| | | As of April 8, 2019 | |
|---|---|---|---|
| | **Type of ownership** | **No. Ordinary Shares** | **% of ordinary share capital** |
| Vivendi S.A. | (direct) | 3,640,109,990 | 23.94 |
| Cassa Depositi e Prestiti S.p.A. | (direct) | 1,503,750,000 | 9.89(*) |
| Paul E. Singer | (indirect) | 1,451,475,688 | 9.55(**) |
| Canada Pension Plan Investment Board | (direct/indirect) | 492,227,486 | 3.24(***) |

(*) as results from participation in the TIM Shareholders Meeting of March 29, 2019.

(**) Paul E. Singer is General Partner of Elliott Capital Advisors LP. The indirect shareholding is held through the controlled companies Elliott International LP, Elliott Associates LP and The Liverpool Limited Partnership. At the TIM Shareholders Meeting of March 29, 2019 the afore-mentioned companies participated with a shareholding equal to 8.81% of the ordinary share capital.

(***) Canada Pension Plan Investment Board participated at the TIM Shareholders Meeting of March 29, 2019 with a direct shareholding equal to 3.21% of the ordinary share capital. On the basis of a disclosure of major shareholdings pursuant to Art.120 of Legislative Decree 58/1998, CPPIB Map Cayman SPC holds a further 0.03% of the ordinary share capital.

All ordinary shares held by TIM shareholders entitle shareholders to participate and vote in ordinary shareholder meetings of the Company with the same rights and at the same conditions.

For more details about the significant changes in the percentage of ownership held by major shareholders, please see Item 4. Information on the TIM Group 4.1 Business 4.1.1 Background .

### 7.1.1 Shareholders Agreements

In 2018, there were no shareholder agreements in force, relating to TIM pursuant to Article 122 of Italian Legislative Decree 58/1998.

The information contained herein regarding shareholders agreements has been derived from publicly available information filed by the parties involved with regulatory authorities. So far as TIM is aware, no facts have been omitted herein which would render the information misleading. No further or other responsibility in respect of such information is accepted by TIM.

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**Item 7. Major Shareholders and Related-Party Transactions** **Major Shareholders**

### 7.1.2 SHAREHOLDERS OWNERSHIP

**v BOARD OF DIRECTORS**

In accordance with applicable Italian law, the following table shows the investments held in TIM S.p.A. and in the related subsidiaries by all the individuals who, during 2018 or a part of that year, have held the post of director in TIM S.p.A.

| Name | Company | Class of shares | Number of shares held at the end of 2016 (or at the date of appointment) | Number of shares purchased in 2017 | Number of shares sold in 2017 | Number of shares held at the end of 2017 (or as of the date on which individual left post, if before) |
|---|---|---|---|---|---|---|
| Giuseppe RECCHI | TIM S.p.A. | Ordinary | 1,000,000 | | 1,000,000 | |
| | | Savings | | 1,200,000 | | 1,200,000 |
| Dario FRIGERIO | TIM S.p.A. | Ordinary | 600,000 | | | 600,000 |
| Hervé PHILIPPE | TIM S.p.A. | Ordinary | 12,500 | | | 12,500 |
| Flavio CATTANEO | TIM S.p.A. | Ordinary | | 1,500,000 | | 1,500,000 |
| Luca MARZOTTO | TIM S.p.A. | Savings | 200,798 | | | 200,798 |

**v BOARD OF AUDITORS**

No individuals who, during 2018 or a part of that year, have held the post of statutory auditor in TIM S.p.A. hold investments in TIM S.p.A. and in the related subsidiaries.

**v EXECUTIVE OFFICERS**

In accordance with applicable Italian law, the following table shows the investments held in TIM S.p.A. and in the related subsidiaries by all the individuals who, during 2017 or a part of that year, have held the post of executive officers in TIM S.p.A.

| Company | Class of shares | Number of shares held at the end of | Number of shares purchased in 2018 | Number of shares sold in 2018 | Number of shares held at the end of 2018 |
|---|---|---|---|---|---|

| | | 2017 (or at the date of appointment) | | (or as of the date on which individual left post, if before) |
|---|---|---|---|---|
| TIM S.p.A. | Ordinary | 76,025 | | 76,025 |
| Tim Participacoes | Ordinary | | 55,645 | 55,645 |

* * *

As of April 8, 2019 no member of the Board of Directors, Board of Auditors or Executive Officers beneficially owned more than 1% of the Ordinary Shares or Savings Shares.

### 7.1.3 CONTINUING RELATIONSHIP WITH THE ITALIAN STATE

The Italian Government is in a position to exercise special powers with respect to TIM.

As indicated in the Order of the Presidency of the Council of Ministers made on September 28, 2017 (the **September Order** ), the Company is subject to the obligations set out in legislative decree no. 21/2012 (the **Golden Power Decree** ) and possesses networks and equipment that perform activities of strategic importance for the national security and defense system (as specified in art. 1 of the Golden Power Decree) and networks and equipment necessary to ensure the minimal supply and operation of essential public services in the communications sector (as specified in art. 2 of the Golden Power Decree). As a result, TIM is subject to the Government s special powers. In particular, the acquisition of more than 3% of the Company s ordinary share capital must be notified to the Italian Government, that can oppose it, and the acts and resolutions of the Company regarding mergers or demergers, the transfer of the business or branches of the business (of TIM and its subsidiaries), the relocation of TIM s registered offices to outside Italy, any changes in the company s purpose, the winding up of the company, the disposal of rights over certain tangible or intangible assets, and the acceptance of constraints that condition their use are subject to the Government s scrutiny and veto powers.

The September Order alleged TIM was subject to and had failed to comply with the obligation to notify, pursuant to art. 2 of the Golden Power Decree, Vivendi s acquisition of corporate control of TIM. The Company believes it had no such obligation to notify; nevertheless, on May 8, 2018 a fine of 74.3 million euros was imposed on TIM. The Company appealed against the fine to the Lazio TAR (the Administrative Court in Rome), applied for a stay of the collection of the fine, and issued a guarantee bond for such amount in favor of the Presidency of the Council. In July 2018, the Lazio TAR granted the Company s application and stayed the obligation to pay the fine, and set the date for a hearing on the merits of the appeal for May 2019. Consequently in the first half of 2018, TIM recognized 74.3 million euros as a provision for legal disputes, accounted for in the separate consolidated income statement among the other operating expenses. The payment of the fine (in case the Company s appeal were rejected) could take place no earlier than May 2019.

By order dated October 16, 2017 (the **October Order** ), the Presidency of the Council of Ministers exercised the special powers set forth in article 1 of the Golden Power Decree and imposed specific governance and organizational obligations and conditions on TIM and its wholly-owned subsidiaries Telecom Italia Sparkle and Telsy. In particular:

- TIM, Telecom Italia Sparkle and Telsy shall set up an organizational unit responsible for the business activities that are relevant for national security (the **Security Organization** );

- the Board of Directors of each such company shall have a Director with powers over the Security Organization (an Italian citizen, with a security clearance, deemed suitable for the role by the Government);

- the Security Organization shall be involved in all decision-making processes relating to strategic activities and the network and must be run by a security officer chosen from a slate of three persons proposed by the Security Intelligence Department at the Presidency of the Council of Ministers;

- TIM and the subsidiaries referred to above shall provide advance information on every decision that may, inter alia, reduce or transfer technological, operational or industrial capacity in strategic activities and file periodic reports with the ad hoc Monitoring Committee at the Presidency of the Council of Ministers (the **Monitoring Committee** ) in order to confirm compliance with all of the above obligations.

TIM, Telecom Italia Sparkle and Telsy mapped their assets and activities currently managed and relevant for defense and national security and set up their Security Organization. They submitted to the Presidency of the Council of Ministers their plan for compliance with the obligations and conditions set out in the October Order. To date, the proposed plan for compliance has not yet been approved and the slate of three persons has not yet been proposed by the Security Intelligence Department.

Consequently, pending discussion with the Monitoring Committee, on May 7, 2018 the Board of Directors of Telecom Italia temporarily appointed Mr. Stefano Grassi (the Head of the Company s security department) as Head of the Security Organization. This arrangement was notified to and accepted by the Monitoring Committee.

By separate order dated November 2, 2017 (the **November Order** ), the Presidency of the Council of Ministers exercised the special powers set forth in article 2 of the Golden Power Decree and imposed specific obligations and conditions that require TIM:

- to adopt plans for the development, investment and maintenance of the network and equipment that are suitable to ensure the continuity of the provision of a universal service and to satisfy the needs of general interest in the medium to long term, and

- to create technical and organizational measures for risk management that can assure the integrity and security of the networks and the continuity of services.

In addition, the November Order requires the Company to provide advance notice to the Monitoring Committee of: (i) any change or reorganization of the ownership structure of the Company and its subsidiaries, and (ii) any plan for the disposal or transfer of strategic assets and any resolution of the Board of Directors that may impact

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the security, availability or operation of the networks and equipment or the continuity of universal service. Finally, the Company is required to submit periodic reports to the Monitoring Committee in order to confirm compliance with these obligations.

The Company has submitted an extraordinary appeal to the President of the Republic to request abrogation of the September Order, the October Order and the November Order.

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## 7.2 RELATED-PARTY TRANSACTIONS

On May 16, 2018, the Board of Directors of TIM S.p.A. acknowledged that the grounds for considering Vivendi the entity exercising direction and coordination powers over TIM no longer applied. Furthermore, on June 25, 2018, the Board of Directors of TIM approved amendments to the internal procedure governing transactions with related parties, and updated the relative related-party boundary to reflect the new situation, whereby Vivendi no longer qualifies as the *de facto* controlling entity over TIM. The procedure was most recently updated by the Board of Directors with some improvements on July 24, 2018.

In accordance with Article 5, paragraph 8 of Consob Regulation 17221 of March 12, 2010 concerning Related party transactions and the subsequent Consob Resolution 17389 of June 23, 2010, no significant transactions were conducted in 2018, as defined by Article 4, paragraph 1a of the aforementioned regulation, that had a material impact on the financial position or the performance of the TIM Group and TIM S.p.A. in 2018. In addition, there were no changes or developments with respect to the related party transactions described in the 2017 Report on Operations which had a significant effect on the financial position or on the performance of the TIM Group and TIM S.p.A. in 2018.

Related-party transactions, when not dictated by specific laws, were conducted at arm s length. They were performed in compliance with the internal procedure, which sets forth rules designed to ensure the transparency and fairness of the transactions in accordance with Consob Regulation 17221/2010.

The current procedure is available on the website www.telecomitalia.com, under the Group section/Governance System channel.

For further information on related party transactions please see Note Related-party transactions and direction and coordination activity of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report.

## Item 8. FINANCIAL INFORMATION

### 8.1 HISTORICAL FINANCIAL STATEMENTS

See Item 18 and Item 19 for a list of financial statements and other financial information filed with this report.

## 8.2 LEGAL PROCEEDINGS

We are continuously involved in a variety of disputes, litigations and other legal proceedings with regulators, competitors and other parties.

For further details, please see Note Contingent liabilities, other information, commitments and guarantees to the Consolidated Financial Statements included elsewhere in this Annual Report.

## Item 9. LISTING

### 9.1 TRADING OF TIM ORDINARY SHARES AND SAVINGS SHARES

The principal trading market for the Ordinary Shares and the Savings Shares is Mercato Telematico Azionario or ( **Telematico** ) (Ticker: TLIT.MI), an automated screen trading system managed by Borsa Italiana (See 9.2 Securities Trading in Italy ).

Ordinary and Savings Share ADSs, each representing respectively ten Ordinary Shares and ten Savings Shares have been listed on the NYSE (Ticker: TI) since August 4, 2003. JPMorgan Chase Bank is the Company s Depositary issuing ADRs evidencing the Ordinary Share ADSs and the Savings Share ADSs.

At the close of business on April 8, 2019 there were 22,386,080 Ordinary Share ADSs outstanding held by 106 registered holders. One of the registered holders is the Depository Trust Company ( **DTC** ) which holds 22,381,819 Ordinary Share ADSs on behalf of beneficial holders.

At the close of business on April 8, 2019 there were 13,806,246 Savings Share ADSs outstanding held by 14 registered holders. One of the registered holders is the Depository Trust Company ( DTC ) which holds 13,804,302 Savings Share ADSs on behalf of beneficial holders.

Fluctuations between the Euro and the U.S. dollar will affect the dollar equivalent of the price of the Ordinary Share and the Savings Shares on Telematico and the price of the Ordinary Share ADSs and the Savings Share ADSs on the New York Stock Exchange.

## 9.2 SECURITIES TRADING IN ITALY

Italian equity securities are traded on the regulated electronic stock market Mercato Telematico Azionario or MTA ( **Telematico** ), which operates under the control of the Commissione Nazionale per le Società e la Borsa (the National Commission for Companies and the Stock Exchange or **Consob** ), the public authority in charge of regulating the securities markets and all public offerings of securities in Italy in order to ensure the transparency and regularity of trading and protect investors.

Telematico is managed by Borsa Italiana, a joint stock company part of the London Stock Exchange Group, responsible for the organization and management of the Italian stock exchange.

Securities transactions on Telematico are settled on a cash basis. Cash transactions are settled on the second trading day following the trading date. Borsa Italiana publishes information on transactions in each listed security, including the volume traded and the high and low prices of the day. No last price is reported, but an official price calculated as a weighted average price of all trades performed during the trading day and a reference price as for the closing auction price. The Bank of Italy, in accordance with Consob, regulates the governing of the clearing system that is currently performed in Italy on an exclusive basis by Monte Titoli (a centralized securities clearing system owned by certain major Italian banks and financial institutions).

For the purposes of the automatic control of the regularity of trading on MTA, the following price variation limits shall apply to contracts concluded on shares making up the FTSE MIB, effective July 1, 2013: (i) ± 5.0% (or such other amount established by Borsa Italiana in the Guide to the Parameters for trading on the regulated markets organized and managed by Borsa Italiana) with respect to the static price (the static price shall be the previous day s reference price, in the opening auction, or the auction price, in the continuous trading phase); and (ii) ± 3.5% (or such other amount established by Borsa Italiana in the Guide to the Parameters ) with respect to the dynamic price (the price of the last contract concluded during the continuous trading phase). Where the price of a contract that is being concluded exceeds one of the price variation limits referred to above, trading in that security will be automatically suspended and a volatility auction phase begun for a certain period of time. Furthermore Borsa Italiana has the authority to suspend trading in any security in response to extreme price fluctuations or for other reasons. The most liquid shares traded on Telematico, including the TIM ordinary shares, are traded on Mercato After Hours , an automated screen trading system managed by Borsa Italiana. Mercato After Hours operates, from 6.00 p.m. to 8.30 p.m.

The FTSE MIB Index is the primary benchmark index for the Italian equity market. Capturing approximately 80% of the domestic market capitalization, the FTSE MIB Index measures the performance of the 40 most liquid and capitalized Italian shares and seeks to replicate the broad sector weights of the Italian stock market. The index is derived from the universe of stocks trading on Borsa Italiana s Telematico market.

The index is calculated in accordance with the Industry Classification Benchmark ( **ICB** ) where main sectors are: Oil & Gas, Constructions & Material, Industrials Goods and Services, Automobiles & Parts, Media, Telecommunications, Utilities, Banks, Technology, Insurance and Personal & Household Goods. Each FTSE MIB constituent is weighted by its free float capital, considering the effective number of shares tradable in the market. Index Constituents weights are capped at 15%; they are reviewed and their weights are rebalanced quarterly (March, June, September and December). The weighting structure can also be changed following extraordinary events (if the capital of a stock increases or other events).

## 9.3 CLEARANCE AND SETTLEMENT OF TIM SHARES

All financial instruments publicly traded on regulated markets including treasury bonds are dematerialized. Companies that issue financial instruments that are publicly traded on regulated markets must inform Monte Titoli, which opens an account in the name of each company in its register.

Beneficial owners of Ordinary Shares and Savings Shares must hold their interests through specific deposit accounts with any participant having an account with Monte Titoli. The beneficial owners of Ordinary Shares and Savings Shares held with Monte Titoli may transfer their shares, collect dividends, create liens and exercise other rights with respect to those Ordinary Shares and Savings Shares through such accounts and may no longer obtain physical delivery of share certificates in respect of their Ordinary Shares and Savings Shares. All new issues of Ordinary Shares and Savings Shares and all other transactions involving Ordinary Shares and Savings Shares must be settled electronically in book-entry form.

Ordinary Shares and Savings Shares are accepted for clearance through Euroclear and Clearstream. Holders of shares may elect to hold such Ordinary Shares and Savings Shares through Euroclear or Clearstream (outside the United States).

# Item 10. ADDITIONAL INFORMATION

## 10.1 CORPORATE GOVERNANCE

### v GENERAL

The Company s corporate governance system is made up of a series of principles, rules and procedures drawn from applicable laws and regulations and from international best practices. The system, designed and organized bearing in mind the principles formulated by the Committee for Corporate Governance of Borsa Italiana, has been implemented with the adoption of codes, regulations and policies covering the activity of all the organizational and operational components of the Company. Most of these documents are available in English on the Internet at www.telecomitalia.com under Governance .

According to applicable Italian law, listed issuers shall annually disclose information on their compliance with codes of conduct issued by regulated stock exchange companies (such as the aforementioned Corporate Governance Code by Borsa Italiana) or by trade associations.

### v CHANGES IN THE REGULATORY FRAMEWORK

No significant change in the regulatory framework took place in 2018 and up to April 8, 2019.

### v CODE OF ETHICS AND CONDUCT

The Code of Ethics and Conduct (the **Code of Ethics** ) of the TIM Group specifies the principles to be respected in relations with all principal stakeholders of the Company: shareholders, financial markets, customers, local communities and employees.

The Code of Ethics was designed on the basis of generally accepted ethical principles and in accordance with the highest international standards, taking into account the principles of Section 406 of the Sarbanes Oxley Act.

As with all of the Company s corporate governance codes and principles, the Code of Ethics is updated in order to ensure conformity with developments in applicable laws and market regulations, while taking into account national and international best practices. The Code of Ethics was last updated on October 3, 2013.

For further details, please see Item 16B. Code of Ethics and Conduct .

### v BOARD OF DIRECTORS

The Company s system of corporate governance is centered on the Board of Directors. The Corporate Governance Principles (the **Principles** ) of TIM supplement the applicable rules concerning the tasks and functioning of the Board of Directors and all the directors are required to comply with the Corporate Governance Principles.

Such Principles have been adopted by the Board of Directors and only serve as a self-regulatory measure. The Principles can be amended through resolutions adopted by the Board and promptly disclosed to the market. The present version of the Principles was approved on September 24, 2018. In addition, on September 24, 2018 the Board of Directors adopted a set of rules governing the activity of the Board aand how it works, dealing with issues such as agenda setting, information flows, minutes taking and conflict of interests.

***Role and tasks***

In accordance with the Italian Stock Exchange Code (by which TIM fully abides) the Board of Directors plays an active role both in the strategic guidance of the Company and in the control of operations, with the power to formulate strategy and responsibility for intervening directly in decisions having the greatest impact on the activity of the Company and the Group. The Board of Directors shall, in particular, have overall responsibility for the internal control and risk management system, including the definition of the nature and level of risk consistent with the specific strategic objectives of the business.

Pursuant to the Company s Principles, the following matters are deemed to have a notable effect on the business of the Company and the Group, and as such are subject to resolutions of the board:

- agreements with competitors that, owing to the subject, the commitments, the conditions and the limits that might be derived from them, have a lasting influence on the freedom of strategic business choices (e.g., partnerships, joint ventures, etc.);
- investments and disinvestments exceeding 250 million euros, and in any event purchases or sales of shareholdings, or businesses or business units that are of strategic significance in the overall framework of the business; transactions that, in their execution or upon their completion, can create commitments and/or purchases and/or sales of this nature and scale;
- the acceptance of loans for amounts exceeding 500 million euros and the granting of loans and guarantees in favor of non-subsidiary companies for amounts exceeding 250 million euros; transactions that, in their execution or upon their completion, can create commitments and/or purchases or sales of this nature and scale;
- any transaction, comprising those not included in the hypotheses set out above, the value of which is equal to 5% or more of the equity or (if more) of the capitalization of the Company at the closure of the last day of trading in the reference period of the most recent periodic accounting document published;
- the listing and delisting of financial instruments issued by the Company or Group companies in regulated markets inside or outside Europe.

Since 2002, the Company has adopted guidelines for carrying out transactions with related parties in order to ensure both procedural and substantial fairness and transparency.

On June 25, 2018, the Board of Directors introduced a set of procedures, which subsequently underwent minor amendments on July 24, 2018. Compared to the preceding versions, the procedures foresee an ad-hoc Board committee (the Related Parties Committee ) to examine and opine on transactions to be carried out with TIM related parties either by TIM or its subsidiaries.

In addition to related parties , as defined by Consob regulation No. 17221 of March 12, 2010 and IAS 24, these procedures also apply to participants in shareholders agreements (if any) that involve the candidacy of TIM Directors, in the case of a majority slate. The procedures taxonomy of transactions is fully consistent and aligned with Consob regulation No. 17221/2010, mentioned above.

For information on the subject of related-party transactions, see Item 7. Major Shareholders and Related-Party Transactions 7.2 Related-Party Transactions .

As part of its function of monitoring and guiding the performance of operations, the Board of Directors assesses the adequacy of the organizational, administrative and accounting structures of the Company on the basis of information made available by management and, with specific reference to the adequacy of the internal control system, in light of the results of the investigations made by the Control and Risk Committee.

The internal control and risk management system is organized and operates according to the principles and criteria set out in the Italian Stock Exchange Code. It is an integral part of the general organizational structure of the Company and the Group, and involves several components that act in a coordinated way according to their respective responsibilities the responsibility of the Board of Directors to direct and provide strategic oversight, the responsibility of the Executive Directors and management to monitor and manage, the responsibility of the Control and Risk Committee and the Head of the Audit Department to overview and provide support to the Board of Directors, and the supervisory responsibilities of the Board of Statutory Auditors.

The Board of Directors, insofar as it is responsible for the internal control and risk management system, defines the guidelines of the system and verifies its adequacy, effectiveness and proper functioning, so that the main corporate risks (including, among others, operational, compliance-related, economic and financial risks) are properly identified and managed over time.

The establishment and maintenance of the internal control system are assigned to the Executive Directors (currently, the Chief Executive Officer Luigi Gubitosi), and to the Manager in charge of preparing the Company s financial report for his area of responsibility (such position is held by the Head of Administration, Finance and Control, Piergiorgio Peluso), so as to ensure the overall adequacy of the system and its functionality, in a risk-based perspective, which is also taken into account in determining the agenda for the Board s proceedings.

The Internal Audit Manager, the Group Compliance Officer and the IT & Security Compliance Department Manager report directly to the full Board; the role of link between the Board of Directors and said control structures is presently assigned to non-executive and independent Chairman of the Board of Directors, Fulvio Conti.

The assessment of the performance of operations is based on a continuous flow of information coordinated by the Chairman of the Board of Directors and directed towards the non-executive directors and the members of the Board of Statutory Auditors. Assessments are made, notably, with a comparison of the results achieved with those budgeted during the examination of the financial reports

***Meetings***

The Board of Directors held 21 meetings in 2018.

As of April 8, 2019, 4 meetings have been held.

When board meetings are to be held, documentation permitting effective participation in the proceedings is provided well in advance, subject to circumstances of the case (as a rule, the Friday preceding the day on which the meeting is to be held, which is normally a Thursday), to enable informed participation in the meetings. When required by the subjects discussed, representatives of the Company management or external consultants are invited to take part, ensuring the necessary technical and professional support.

***Appointment of Directors***

As noted above, TIM s bylaws (Article 9) provide for the Board of Directors to be elected by the Shareholders Meeting through a slate system, which is presently mandatory under Italian law.

The slate system is designed to ensure the presence on the Board of Directors of persons drawn from slates presented by minority shareholders. Shareholders who together hold at least 0.5% of the ordinary share capital can put forward slates of candidates. The slates and the accompanying documentation (such as the curricula vitae of the candidates) must be filed at the Company s registered office at least 25 days and made available to the public at least 21 days before the date scheduled for the shareholders meeting. Consob requires the Company to make the slates and the relevant information available to the public at its registered office, at Borsa Italiana and on its website www.telecomitalia.com. According to TIM s bylaws, slates of candidates can be put forward also by the outgoing Board of Directors. The Board of Directors is elected as follows:

- two thirds of the directors to be elected are chosen from the slate that obtains the simple majority of the votes cast by the shareholders, in the order in which they are listed on the slate; in the event of a fractional number, it is rounded down to the nearest whole number;

- the remaining directors are chosen from the remaining slates. To that end, the votes obtained by the various slates are divided successively by whole numbers from one up to the number of directors to be appointed and the results (quotients) obtained are assigned to the candidates on each slate in the order specified thereon. On the basis of the quotients assigned, the candidates on the various slates are arranged in a single decreasing ranking. Those who have obtained the highest quotients are elected.

At least half of the directors chosen from each slate (with rounding up) must be independent, as per applicable requirements. If necessary, the last names elected from a slate that do not fulfil these requirements will be replaced, in order, by the first of those not elected from the same slate who fulfill said requirements. In the absence of a sufficient number of independent candidates in a slate, the Shareholders Meeting shall complete the board with the legal majorities, ensuring that the requirement is fulfilled.

All slates that present three or more candidates must have a gender ratio of at least 1:3 among the candidates. If the vote on the slates does not fulfill this diversity requirement in the composition of the Board, the appointment

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of the last of the persons elected from the majority slate who are of the more represented gender is forfeited, and they are replaced with the first unelected candidates of the less represented gender on the same slate, in the number needed to ensure the prescribed gender balance. In any case, if the slate mechanism fails, the Shareholders Meeting retains the right to appoint directors by a subsequent vote, applying the legal majorities, so that the gender diversity requirement is ensured in the composition of the Board.

With respect to the current composition of the Board, see above Item 6. Directors, Senior Management and Employees . See also: Risks associated with TIM s ownership chain under Item 3. Key Information 3.1 Risk Factors .

***Composition***

According to the bylaws, the shareholders meeting decides the exact number of Board members within a minimum and a maximum number (from 7 to 19). Directors may serve for a maximum term of three years, they may be re-elected and there is no statutory age limit for eligibility. There are no provisions in Italian law that set age or shareholding requirements for directors qualification. There are no provisions in the TIM bylaws relating to the retirement of a director under an age or tenure limit requirement.

If during the term of the Board of Directors, one or more directors cease to hold such position for any reason, the Board of Directors may appoint replacements by a resolution approved by the Board of Auditors. The directors so appointed remain in office until the next Shareholders Meeting. The replacements finally appointed by the Shareholders Meeting will remain in office for the same term as the other members already in office at the time of their appointments. In the event of replacement of an independent board member, the Nomination and Remuneration Committee is responsible for proposing a candidate.

Article 3 of the Company s Corporate Governance Principles establishes a cap on the maximum number of positions that TIM directors may hold in management and control bodies of other companies. The general rule is that the position of TIM director is not compatible with directorships or auditorships in more than five companies, other than TIM subsidiaries or affiliates, when such companies:

· are listed and included in the FTSE/MIB index; and/or

· operate prevalently in the financial sector on a public basis; and/or

· engage in banking or insurance.

A TIM directorship is considered incompatible with holding more than three executive positions in companies of the types specified above. The Board of Directors may nonetheless permit exceptions to these rules, subject to such exceptions being made public. If a Director holds office in more than one company belonging to the same Group, only one office held within that Group is taken into account for purposes of calculating the number of offices.

***Impact of Shareholders Agreements on the Nomination of TIM Group s Companies Boards***

Effective June 17, 2015, the shareholder agreement in place between the shareholders of Telco S.p.A. was dissolved, as disclosed by public notices in accordance with the applicable regulations. As a result, there are no longer any shareholder agreements for TIM pursuant to Article 122 of Italian Legislative Decree 58/1998.

See Item 7. Major Shareholders and Related-Party Transactions Item 7.1.1. Shareholders Agreements .

***Independent Directors***

At least two members of the Board of Directors must satisfy the independence requirements set forth by the Consolidated Law on Finance for the members of the Board of Auditors (but see above the independence quota to be met by candidates chosen from each single slate). Moreover, Article 3 of the Corporate Governance Principles incorporates by reference the independence criteria set out in the Borsa Italiana s Corporate Governance Code.

To qualify as independent under Borsa Italiana s Corporate Governance Code and the Company s Corporate Governance Principles, TIM directors must not maintain, nor have recently maintained, directly or indirectly any business relationships with the issuer or persons linked to the issuer (Group companies, executive directors or members of their families), of such a significance as to influence their autonomous judgment, and should not be in a position to influence the Company as a consequence of the shares they hold or their participation in shareholders agreements. Specific presumptions are listed in Borsa Italiana s Corporate Governance Code.

The Board of Directors verifies the independence requirements at the first meeting after the appointment of the Board and subsequently once a year. On the basis of the declarations made by the interested parties and verified by the Board of Directors, as of April 8, 2019 12 out of the 15 directors are considered independent, according to the criteria set forth by the Consolidated Law on Finance as well as the criteria set forth by Borsa Italiana Code:, Alfredo Altavilla, Paola Bonomo, Giuseppina Capaldo, Maria Elena Cappello, Massimo Ferrari, Paola Giannotti, Lucia Morselli, Marella Moretti, Dante Roscini, Rocco Sabelli and Michele Valensise. The Board of Directors specifically acknowledged its Chair qualifies as independent as well. The Board of Auditors verified the correct application of the principles adopted by the Board to evaluate the independence of directors. See Item 16G. Corporate Governance 16G.1. Differences in TIM s Corporate Governance and New York Stock Exchange Corporate Governance Practices .

***Executive Directors and Activities of the Board***

The authority to grant delegated powers to directors and revoke such mandates is reserved to the Board of Directors, which also establishes their objects, limits, manner of exercise and the intervals of not more than three months at which persons with delegated powers must report on their activity, the general results of operations, and the transactions of greatest economic, financial or balance sheet significance concluded by the Company or its subsidiaries.

After its renewal by the Shareholders Meeting on May 4, 2018, the Board of Directors, in its meeting on May 7, 2017, appointed Fulvio Conti Chairman and Amos Genish as Chief Executive Officer. On November 13, 2018 the Board of Directors revoked all powers conferred to Director Amos Genish, that were provisionally assigned to the Chairman of the Board. On November 18, 2018 the Board of Directors appointed Luigi Gubitosi Chief Executive Officer and General Manager, conferring him executive powers.

The Board of Directors on November 18, 2018 confirmed the pre-existing governance arrangements as follows:

- the Chairman was granted the responsibilities laid down by law, the Company s Bylaws and the Company s Corporate Governance Principles;

- the CEO was conferred all the powers necessary to carry out the Company s activities, with the exception of those reserved by law and the Bylaws to the Board of Directors, and the overview of the Security Officer. This final exception was superseded with a Board resolution on February 21, 2019.

Following his appointment as CEO and General Manager, Luigi Gubitosi qualifies as a (non-independent) Executive Director.

***Internal Committees***

According to article 13 of the Bylaws, the Board may set up committees from among its members charged with giving advice and making proposals and shall establish their powers and duties. The Corporate Governance Principles provide for four Committees: the Nomination and Remuneration Committee, the Control and Risk Committee, the Related Parties Committee and the Strategy Committee.

With regard to the composition, each of the Control and Risk Committee, the Nomination and Remuneration Committee and the Related Parties Committee are composed only of non-executive; the Strategic Committee is composed of the Chair of the Board of Directors and the Chief Executive Officer (who ensure its coordination with the management of the Group), as well as non-executive directors with expertise in technology, organizational strategies and corporate finance.

***Control and Risk Committee***

According to the Italian Stock Exchange Code, the Committee shall:

- evaluate together with the person responsible for the preparation of the corporate financial documents, after hearing the external auditors and the Board of statutory auditors, the correct application of the accounting principles and, in the case of groups, their consistency for the purpose of the preparation of the consolidated financial statements;
- express opinions on specific aspects relating to the identification of the main risks for the company;
- review the periodic reports evaluating the internal control and risk management system, as well as those reports of the internal audit function that are particularly significant;
- monitor the independence, adequacy, efficiency and effectiveness of the internal audit function;
- request that the internal audit function review specific operational areas, giving simultaneous notice to the chairman of the Board of Statutory Auditors; and
- report to the Board of Directors, at least every six months, on the occasion of the approval of the annual and half-year financial report, on the activity carried out, as well as on the adequacy of the internal control and risk management system.

In addition, according to TIM s Principles and Control, it shall also:

- exercise a supervisory function on the sustainability of company activities;
- monitor observance of the Company s corporate governance rules, the evolution of rules and best practice in the field of controls, corporate governance and corporate social responsibility, also with a view to proposing updates to the internal practices and rules of the Company and the Group;
- overview financial and non-financial fiscal year disclosure, in view of examination by the full board;
- perform any additional tasks assigned by the Board of Directors.

On August 5, 2014 the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019 the Control and Risk Committee was composed of Paola Giannotti (Chairwoman), Massimo Ferrari, Marella Moretti, Lucia Morselli and Michele Valensise. In 2018, it held 21 meetings.

***Nomination and Remuneration Committee***

According to the Italian Stock Exchange Code, the Committee shall:

- periodically evaluate the adequacy, overall consistency and actual application of the policy for the remuneration of directors and key management personnel, also on the basis of the information provided by the managing directors; it shall formulate proposals to the Board of Directors in that regard;
- submit proposals or issue opinions to the Board of Directors for the remuneration of executive directors and other directors who cover particular offices as well as for the identification of performance objectives related to the variable component of that remuneration; monitor the implementation of decisions adopted by the Board of Directors and verify, in particular, the actual achievement of performance objectives;
- express opinions to the Board of Directors regarding its size and composition and express recommendations with regard to the professional skills necessary within the Board, limit to the accumulation of offices and derogations from the prohibition of competition pursuant to Article 2390 of the Italian Civil Code; and
- submit to the Board of Directors candidates for director s office in case of co-optation, should the replacement of independent directors be necessary.

In addition, according to the Company s Corporate Governance Principles, it shall also:

- oversee the succession plan for Executive Directors, and monitor the updating of the company management replacement lists, prepared by the Executive Directors;

- share with the Executive Directors in advance their decisions in relation to the appointment of managers who report directly to them and the nomination of Chief Executive Officers of the most important subsidiaries;

- establish the procedure and timeframe for the annual evaluation of the Board of Directors;

- propose the criteria for allocating the total annual compensation established by the Shareholders Meeting for the whole Board of Directors; and

- perform other duties assigned to it by the Board of Directors.

On August 5, 2014, the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019 the Nomination and Remuneration Committee was composed of Alfredo Altavilla (Chairman), Paola Bonomo, Giuseppina Capaldo, Rocco Sabelli and Michele Valensise. In 2018 it met 14 times.

For more information concerning the remuneration of directors and top management see Item 6. Directors, Senior Management and Employees 6.6 Compensation of Directors, Officers and Members of the Board of Auditors .

***Strategic Committee***

According to the Company s Corporate Governance Principles, the Strategic Committee shall:

- ensure support on matters of strategic importance;

- at the request of the Chairman of the Board of Directors and the Chief Executive Officer, and in coordination with the prerogatives of their respective offices and powers, carry out preliminary assessments on the strategic choices of the Group;

- provide opinions and formulate recommendations on strategic plan proposals to bring to the Board of Directors.

On July 26, 2016, the Board of Directors approved a set of rules governing the activity of the Committee.

As of April 8, 2019, the Strategic Committee was composed of the Chairman of the full Board (Fulvio Conti), the CEO (Luigi Gubitosi) and Directors Massimo Ferrari, Arnaud Roy de Puyfontaine and Rocco Sabelli. In 2018 it met 3 times.

**Related Parties Committee**

On May 16, 2018, the Board of Directors created the Related Parties Committee, which was charged with the monitoring of transactions with related parties, according to internal procedure.

As of April 8, 2019 the Related Parties Committee was composed of Lucia Morselli (Chairwoman), Giuseppina Capaldo, Maria Elena Cappello, Marella Moretti and Dante Roscini. In 2018 it met 9 times.

**Internal Control System**

The internal control system is a set of rules, procedures and organizational structures that, through a process of identifying, measuring, managing and monitoring the main risks, allows the sound and fair operation of the company in line with the pre-established objectives. As such this process is aimed at pursuing the values of both procedural and substantial fairness, transparency and accountability, which are considered key factors for managing TIM s business, in compliance with the Code of Conduct and Ethics of the Group and the Company s Corporate Governance Principles. This process, constantly monitored with a view to progressive improvement, is intended to ensure, in particular, the efficiency of company operations and entrepreneurial conduct, its transparency and verifiability, the reliability of information and management and accounting data, and compliance with applicable laws and regulations as well as the safeguarding of company integrity and its assets, in order to prevent fraud against the Company and the financial markets.

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The Board of Directors, insofar as it is responsible for the internal control system, sets the guidelines, verifying its adequacy, effectiveness and proper functioning, so that the main company risks (operational, compliance-related, economic and financial) are properly identified and managed over time.

In the exercise of its responsibility for the internal control system the Board benefits from the activities of the Control and Risk Committee, but also of the Head of the Internal Audit Department, a manager who is given an adequate level of independence and means suitable to perform this duty. The Head of the Audit Department assesses the adequacy, full functioning and effectiveness of the control and risk management system and consequently proposes corrective measures in case of anomalies and malfunctions.

In particular, in accordance with the provisions of the Corporate Governance Code of Borsa Italiana, the Head of the Audit Department:

a) verifies, both on a continuous basis and in relation to special needs, in conformity with international standards, the adequacy and effective functioning of the internal control and risk management system, through an audit plan approved by the Board of Directors, based on a structured analysis and ranking of the main risks;

b) is not responsible for any operational area and reports directly to the Board of Directors;

c) has direct access to all information useful for the performance of his or her duties;

d) drafts periodic reports containing information on his or her own activity, and on the risk management process, as well as about compliance with the plans defined to mitigate these risks. Such periodic reports contain an evaluation of the adequacy of the internal control and risk management system;

e) prepares timely reports on particularly significant events;

f) submits the reports referred to in points (d) and (e) above to the Chairs of the Board of Statutory Auditors, Control and Risk Committee as well as to the Chair of the Board of Directors and the Chief Executive Officer in relation to the power assigned to them for Internal Control Issues;

g) tests the reliability of the information systems, including the accounting system, as part of the audit plan; and

h) reports on his or her work to the Director delegated for this purpose, the Control and risk Committee and, through the latter, to the Board of Directors, as well as the Board of Statutory Auditors. In particular, he or she reports on how risk is managed, as well as on compliance with established plans for risk containment, and expresses his or her assessment on the suitability of the internal control system for achieving an acceptable overall risk profile. The Head of the Audit Department also has a role in ensuring respect of the principles and values expressed in the Code of Ethics and Conduct, by handling reports from employees, collaborators, consultants, and third parties in business relationships with the Group on violations of laws or regulations, of the Code itself, and of internal procedures, as well as irregularities or negligence (including accounting), and promoting the most appropriate resulting initiatives, including the proposal to impose sanctions.

The oversight role of the Head of Internal Audit is directed towards expressing an assessment in terms of reasonable certainty about the capacity of the internal control system to impact on the actual achievement of the objectives assigned to individual company structures (effectiveness profile), taking account of the rational use of resources for their realization (efficiency profile) in the light of the (qualitative/quantitative) risk factors present and the probability of their affecting the achievement of those objectives.

The TIM Group has adopted an Enterprise Risk Management (ERM) process which enables risks to be identified, assessed and managed in a homogeneous way within the Group companies, highlighting potential synergies between the players involved in the assessment of the Internal Control System. There is particular focus on the relationship between the ERM process and the business planning process, particularly in proposing the acceptable level of risk for the Group (Risk Appetite), as well as its distribution in levels of acceptable deviation on the principal corporate objectives (Risk Tolerance).

The process is directed by the ERM Steering Committee. The Steering Committee assures governance of Group risk management, aimed at guaranteeing the operational continuity of the business, monitoring the effectiveness of the measures adopted. The ERM process is designed to identify potential events that may impact on business activity, to manage the risk within acceptable limits and to provide reasonable assurance of the achievement of the corporate objectives.

The Company s internal control system is completed according to the 231 Organizational Model, which provides a model of organization and management adopted pursuant to Italian Legislative Decree No. 231/2001, and is aimed at preventing violations that can result in liability for the Company. The Organizational Model also constitutes an integral component of the reference compliance program for the application of anti-corruption legislation such as for example the FCPA and the UK Bribery Act. In this context, a foreign version of the Organizational Model has been defined for adoption by the non-Italian subsidiaries, also taking account of the possible application of similar regulations at local level.

Monitoring of the functioning and compliance with the model as from May 2012 is performed by the Board of Statutory Auditors (supported in its activities by appropriate offices within the Company) which oversees the operation and observance of the Organizational Model and reports to the Board of Directors the checks it has undertaken and their outcome.

The 231 Organizational Model is subject to continuing improvement. Some revisions are made necessary by changes in the law, while others are proposed when deemed appropriate in the light of the results of the model s application. The amendments are drafted by a managerial committee called Steering Committee 231, briefed by the Board of Statutory Auditors acting as Supervisory Panel and approved by the Board of Directors when of a significant nature.

**Board of Auditors**

***Tasks and role***

The Board of Auditors verifies compliance with the law and the Bylaws and verifies adherence to the best administration principles, the adequacy and reliability of corporate structures, internal audit procedures and accounting system, and the adequacy of instructions given by the Company to its subsidiaries. The Board of Auditors must receive timely disclosures, at least quarterly, from the Board of Directors about the company s business and significant transactions performed by the company and its subsidiaries, including related parties transactions. Statutory Auditors must inform Consob of any irregularity they detect in the course of their duties and are required to attend Shareholders Meetings, Board of Directors meetings and Executive Committee meetings.

In addition to that, under the provisions of Legislative Decree 231/2001, Supervisory Panel functions have been granted to the Board of Auditors.

During 2018, there were 37 meetings of the Board of Statutory Auditors, 6 of which were held jointly with the Control and Risk Committee. In addition, its members participated in the meetings of the Board of Directors and the Board committees and periodically received the reports from the executive directors, as provided in the above mentioned procedure.

***Appointment***

TIM s Board of Auditors is composed of five regular auditors, and four alternate auditors. The Board of Auditors is appointed by the Shareholders Meeting through the slate system under the same procedure used for the election of the Board of Directors. Three regular auditors and two alternate auditor are drawn from the so called majority slate (that is the slate that obtained the simple majority of the votes cast by the shareholders), two regular auditors and two alternate auditors are taken from the other slates, so called minority slates .

All slates that present three or more candidates shall have a gender ratio of at least 1:3 among the candidates. If the vote on the slates does not fulfill the diversity requirement in the composition of the Board, the appointment of the last of the persons elected from the majority slate who are of the more represented gender is forfeited, and they are replaced with the first unelected candidates of the less represented gender on the same slate, in the number needed to ensure the prescribed gender balance. In any case, if the slate mechanism fails, the Shareholders Meeting retains the right to appoint auditors by a subsequent vote, applying the legal majorities, so that the gender diversity requirement is ensured in the composition of the Board.

Pursuant to applicable Italian law, the Chairman of the Board of Auditors is appointed by the shareholders meeting from among the auditors elected from a minority slate .

Auditors serve for a three-year term, may be reappointed and may be removed from their office for just cause and upon a resolution approved by the competent court.

***Audit Committee***

As described above, the Board of Auditors plays a key role in the Company s system of corporate governance.

More specifically, according to Rule 10A-3 under the 1934 Act and NYSE listing standards, the Board of Auditors has been identified to act as TIM s Audit Committee. The Board of Auditors meets the requirements of the general exemption contained in Rule 10A-3(c)(3):

- the Board of Auditors is established pursuant to applicable Italian law and TIM s Bylaws;
- under Italian legal requirements, the Board of Auditors is separate from the Board of Directors;
- the Board of Auditors is not elected by the management of the Company and no executive officer is a member of the Board of Auditors;
- all of the members of the Board of Auditors meet specific independence requirements from the Company and its Group, the management and the auditing firm, as set forth by Italian legal provisions;
- the Board of Auditors, in accordance with and to the extent permitted by Italian law, is responsible for the appointment, retention (via proposal to the shareholders meeting) and oversight of the work of the Company s external auditors engaged for the purpose of issuing the audit report on the annual financial statements;
- the Board of Auditors is authorized to engage independent counsel and other advisers, as it deems appropriate; and
- the Board of Auditors has adopted a complaints procedure in accordance with Rule 10A-3 of the 1934 Act.

In view of its responsibilities under Italian law and the obligations deriving from US law, the Board of Auditors adopted a complaints procedure for receiving, retaining and treating the reports it receives. Such reports can be of the following kinds:

- statements of violations submitted by shareholders concerning matters deemed to be improper;
- complaints by any person, thus including non-shareholders, concerning alleged irregularities, improper facts or, more generally, any problem or issue deemed to merit investigation by the control body;
- complaints specifically regarding accounting, internal accounting controls, or auditing matters; and
- confidential, possibly anonymous submissions of concerns by employees of the Company or the Group regarding questionable accounting or auditing matters.

A short description of how such reports are to be submitted to the Board of Auditors/Audit Committee is available on the Company s website under Governance .

**Shareholders Meetings**

***Meetings of Ordinary Shareholders***

Holders of Ordinary Shares are entitled to attend and vote at ordinary and extraordinary shareholders meetings. At any Shareholders Meeting, each holder is entitled to cast one vote for each Ordinary Share held. Votes may be cast personally or by proxy. According to the bylaws, the issuer may designate, for each Shareholders Meeting, one or more representatives on whom those entitled to vote may confer a proxy free of charge. The person so designated, and the necessary operating instructions, shall be stated in the notice calling the meeting. Holders of Ordinary Shares can also vote by mail or through a proprietary, web based platform, if so specified in the notice of the specific meeting and in the ways specified therein.

**Item 10. Additional Information** **Corporate Govenance**

Shareholders Meetings are called by the Company s Board of Directors when required by law or the shareholders or deemed necessary.

Shareholders Meetings must be convened at least once a year. At these ordinary meetings, holders of Ordinary Shares (i) approve the annual accounts, (ii) appoint/revoke directors and auditors and determine their remuneration, when necessary, (iii) vote on other issues defined in the Bylaws, if any, (iv) authorize the completion of the transactions by the directors, if and when the Bylaws call for such previous authorization, it being understood that directors remain directly responsible for the transactions accomplished, and (v) adopt rules of procedure for the shareholders meetings (Meeting Regulations).

It is mandatory for issuers to publish their annual report within 120 days of the close of their fiscal year; the approval by the annual general meeting shall follow no later than 180 days after the end of the fiscal year, if the bylaws so provide (and this is the case in TIM).

Extraordinary Shareholders Meetings may be called to pass upon proposed amendments to the Bylaws, capital increases, mergers, dissolutions, issuance of convertible debentures (which can also be delegated to the Board of Directors), appointment of receivers and similar extraordinary actions.

As a rule, shareholders are informed of all Shareholders Meetings to be held by publication of a notice at least 30 days (40 days in case of Shareholders Meetings convened to appoint corporate bodies) before the date fixed for the meeting. The notice must be posted on the issuer s internet site, published in extract form in at least one national daily newspaper, and filed with the Italian Stock Exchange and Consob. TIM s bylaws allow the Shareholders Meeting to be called either in a single call or with up to two meeting dates for an ordinary Shareholders Meeting and up to three meeting dates for an extraordinary Shareholders Meeting. When the meeting is convened in a single call, the quorums of second calls of ordinary Shareholders Meeting and third calls of extraordinary Shareholders Meeting, as the case may be, apply.

An ordinary Shareholders Meeting is duly constituted on first call with the attendance of at least 50% of the outstanding Ordinary Shares, while on second call there is no quorum requirement. In either case, resolutions are approved by holders of the majority of the Ordinary Shares represented at the meeting.

Extraordinary Shareholders Meetings are duly constituted with the attendance of shareholders representing at least one-half or more than one-third or at least one-fifth of the company s ordinary share capital, on the first call, second call and third call, respectively. The favorable vote of at least two-thirds of the Ordinary Shares represented at the meeting is necessary for the resolution approval.

To attend and vote at any Shareholders Meeting, holding of shares on the record date (statutorily set at seven trading days before the meeting) is the sole requirement, but to certify that an ad hoc communication by the authorized intermediary must have been received by the Company.

Special arrangements with the Depositary may be required for the beneficial owner of ADRs representing ADSs to attend Shareholders Meetings and exercise voting rights with respect to underlying Ordinary Shares. See 10.5 Description of American Depositary Receipts Voting of Deposited Securities .

Votes cast in the Shareholders Meeting are open, as the minutes of the meeting are required to evidence how attending shareholders voted.

Shareholders may attend the meeting by proxy using a power of attorney. There is no limit to the number of shareholders any one proxy can represent. A proxy may be appointed only for one single meeting (including, however, the first, second and in case of extraordinary meetings third call) and may be substituted by the person expressly indicated in the form or, if the proxy is so authorized, by the substitute the proxy appoints.

Votes by proxy may be solicited and collected for the shareholders meetings of listed companies. Proxy solicitation provisions allow individuals (and even the issuer), to promote the soliciting of votes by proxy at shareholders meetings. There is no ownership requirement to this end. Proxy solicitation is subject to specific rules and disclosure requirements set forth by Consob.

In addition, shareholders associations may collect proxies among their group, without any specific disclosure requirement. In order to facilitate such operation among employee shareholders, the Bylaws provides that special measures will be made available to such shareholders associations in order to facilitate dissemination of information about solicitation and proxy collection operations.

Ordinary Shareholders may also vote by mail. The vote by mail cannot be cast by proxy. The system is essentially based on the following principles: (a) the notice calling the shareholders meetings must specify that shareholders can vote by mail and must describe the procedures they have to follow; (b) shareholders wishing to vote by mail (to be duly entitled to vote through timely communication to the issuer, as described above) must send the company a special form (so called ballot) made available for such purpose by the issuer, which has to comply with specific Consob requirements; (c) votes cast by mail must be delivered to the company at least on the day before the Shareholders Meeting takes place; and, finally, (d) votes cast by mail remain valid for the second and third calls of the meeting and can be revoked by a written declaration until the day before the meeting, or directly in the meeting through an ad-hoc statement by the interested party.

The Company s bylaws provide that, if the notice of the meeting specifies it and in the ways described therein, Ordinary Shareholders may also vote electronically, in advance of the meeting.

The shareholders meetings shall be called when requested by shareholders representing at least 5% of a company s share capital. In case the directors or in their place the statutory auditors don t call the Shareholders Meeting, the Court orders with a decree the call of the Shareholders Meeting, after having heard the directors and statutory auditors, if the refusal is unjustified. Shareholders are not allowed to present requests on topics upon which the Shareholders Meeting resolves, pursuant to Italian law, on directors proposal or on a project basis only.

Shareholders representing at least 2.5% of the share capital may request, within ten days of the publication of the notice convening the meeting, additions to the agenda of the shareholders meeting or presentation to the shareholders meeting of alternative proposals for resolution on items already on the agenda. Added items and alternative proposed resolutions on items already on the agenda, have to be disclosed in the same ways as the notice calling the meeting, at least fifteen days prior to the date scheduled for the shareholders meeting. Additions to the agenda and/or alternative proposed resolutions cannot be submitted for matters on which the shareholders meeting is required by law to resolve on proposals put forward by the directors or on the basis of a plan or report by the Board of Directors.

The Shareholders Meeting on May 6, 2004 adopted a set of Rules of Proceeding, which apply to both Ordinary and Extraordinary meetings, which were amended by the shareholders Meeting of April 12, 2011. The current version of the Rules is posted on the Company s website under Governance .

***Meetings of Savings Shareholders***

Although holders of Savings Shares are not entitled to vote in meetings of holders of Ordinary Shares, they are entitled to attend special meetings of holders of Savings Shares ( Special Meetings ) and to appoint a joint representative (the Joint Representative ) to represent them, with respect to the Company.

The Joint Representative, who is appointed by the Special Meeting or, in default, by the Court, is entitled (i) to inspect certain corporate books of the Company, (ii) to attend the Shareholders Meetings and (iii) to challenge in court the resolutions adopted by such meetings. The Joint Representative is appointed for a maximum three-year term and, according to the Bylaws, is kept informed by the Company regarding corporate events that can affect the price trend of Savings Shares. The Savings Shareholders Meeting held on June 16, 2016 confirmed Mr. Dario Trevisan as joint Representative for a three year period which will expire with the Ordinary Shareholders Meeting to be convened for approval of the Company s financial statements for the year 2018.

Special Meetings of Savings Shareholders may be called when deemed necessary or upon request by Savings Shareholders representing at least 1% of the outstanding Savings Shares either by the Joint Representative or by the Company s Board of Directors in order to (a) appoint and revoke the Joint Representative, (b) approve the resolutions of the Shareholders Meetings that may affect the rights of Savings Shares, (c) set up an expense fund for the coverage of costs incurred in protecting rights of the Savings Shareholders, (d) negotiate possible disputes with the Company; and (e) resolve other issues relating to their position as holders of Savings Shares. To adopt resolutions related to (a), (c) and (e) above, a favorable vote of at least 20% of the Savings Shares is required at Special Meetings held on the first call, a favorable vote of at least 10% is required at Special Meetings held on the second call, and a favorable vote of at least a majority of the Savings Shares present is required at Special Meetings held on the third call. To adopt resolutions related to (b) and (d) above, a favorable vote of at least 20% of the Savings Shares is required at all calls of the Special Meetings.

To attend and vote at any Special Meeting, holding of Savings Shares on the record date (statutorily set at seven trading days before the meeting) is the sole requirement, but to certify that, an ad hoc communication by an authorized intermediary must have been received by the Company. Special arrangements with the Depositary may be required for the beneficial owner of ADRs representing Savings Share ADSs to attend Special Meetings and exercise voting rights with respect to underlying Savings Shares. See 10.5 Description of American Depositary Receipts Voting of Deposited Securities .

**Disclosure**

Transparent relations with the financial markets, and the provision of accurate information are paramount for TIM Group.

A specific procedure (posted on the Company s website under Governance ) covers the handling including the public disclosure of inside information concerning TIM and its listed financial instruments, and is addressed to all the members of the governing bodies, employees and outside consultants of Group companies who have potential access to inside information. It also applies as an instruction to all subsidiaries for the purpose of promptly obtaining the necessary information for timely and correct compliance with public disclosure requirements.

After MAR came into force in July 2016, on February 3, 2017, the Board of Directors approved the existing Procedure. On October 13, 2017, Consob published a document of guidelines for the management of inside information, which contains a possible reference prototype for the issuer, in part based on cogent provisions and in part based on Consob directions , without prescriptive content.

On September 24, 2018 the Board of Directors amended the Procedure taking into account Consob Guidelines.

The updated procedure:

- extends the safeguards to protect the confidentiality of inside information to information that still does not possess the requirements of precision, but which, if it should become precise, would qualify as inside information (so called relevant information);

- provides rules for the identification of relevant and inside information (defining criteria and responsibilities/processes). Decisions are to be taken with the necessary intervention of the General Counsel and Chief Financial Officer, for those aspects within their respective remits, and with the aim of making the judgement uniform;

· sets out the obligations and prohibitions deriving from access to relevant and inside information, or from the possibility of generating such information (which is a typical characteristic of insiders), emphasising the principle that knowledge and application of the regulation that applies to informed people and/or insiders are the personal responsibility of the respective recipients;

· provides rules for the phase of public disclosure (and delay in disclosure) of inside information, setting out the roles and responsibilities of the various subjects involved;

· describes the ways in which the obligation to draw up lists of people who have access to relevant and inside information may be complied with, envisaging the activation of a specific supplementary section applicable only to those who have permanent access to all the Company information that qualifies as inside information (essentially: the Executive Directors and the departments structurally involved in the phase of establishing the inside nature of the information);

- provides a series of operational references, principles of application and criteria for interpretation on the topic of insider dealing and the closed period;

- makes reference to the legal penalty regime that applies in case of non-compliance with the relevant law, also setting out the contractual responsibility aspects of breaching this regime (and its possible consequences).

The Procedure is available on the Company s website.

With reference to the preparation of the financial statements for 2018, the procedures for the Preparation of TIM 2018 annual report for Italian purposes and TIM 2018 Form 20-F provide for specific mechanisms of upward attestation by the people in charge of the various corporate structures involved in the process of gathering and handling data and drafting the document. This is aimed at giving adequate assurance and support to the senior officers, the Board of Auditors, the Control and Risk Committee and the Board of Directors as a whole in fulfilling their responsibility for oversight of the accuracy and timeliness of required disclosures.

## 10.2 EXCHANGE CONTROLS AND OTHER LIMITATIONS AFFECTING SECURITY HOLDERS

### Foreign Investment and Exchange Control Regulations in Italy

There are no exchange controls in Italy. Residents of Italy may hold foreign currency and foreign securities of any kind, within and outside Italy. Non-residents may invest in Italian securities and may export cash, instruments of credit and securities, in both foreign currency and euro, representing interest, dividends, other asset distributions and the proceeds of dispositions without restriction other than those outlined below. There are no limitations on the right of non-resident or foreign beneficial owners to vote their Shares except as provided for all TIM shareholders by law. See 10.4 Description of Capital Stock Limitations on Voting and Shareholdings .

Reporting and record-keeping requirements are contained in Italian legislation which implements an EU Directive regarding the free movement of capital. Such legislation requires that transfers of cash or bearer bank or postal passbooks or bearer instruments in euro or in foreign currency, effected for whatsoever reason between different parties, shall be carried out by means of credit institutions and any other authorized intermediaries when the total amount of the value to be transferred is equal to or more than 1,000.00 euros. However, with respect to some types of cash payment, the threshold has been raised to 3,000.00 euros by the Budget Law for 2016 (Law n. 208 of December 28, 2015). The threshold referred to above also applies when there is reason to believe that several transactions, effected at different times within a certain period of time, constitute part of a single transaction, even if individually below the threshold amount specified. Whenever the execution of such transactions leads to belief that there are irregularities in their performance, such transactions shall be reported in writing to the Italian Central Bank which shall carry out necessary checks. Credit institutions and other intermediaries effecting such transactions on behalf of residents or non-residents of Italy are required to maintain records of such transactions for ten years, which may be inspected at any time by Italian authorities. Non-compliance with the above may result, among others, in administrative fines or, criminal penalties if the transactions fall within a case ruled by the criminal code. Certain additional procedural requirements are imposed for tax reasons. Non-corporate residents (i.e., individuals, non-commercial partnerships and non-commercial entities) which are resident of Italy for tax purposes and which in the course of the fiscal year hold (or are beneficial owners, as defined for anti-money laundering purposes, of) investments abroad or have financial activities abroad must, in certain circumstances, disclose such investments or financial activities regardless of the value of such assets (in contrast, for assets held up to December 31, 2012, the disclosure must be done only if such financial assets held abroad at the end of the fiscal year exceeded 10,000.00 euros). Particularly, non-corporate residents must report on their income tax returns the level of the investments or financial activities held abroad during the tax period, regardless of the total value of the same. This requirement applies even if the taxpayer during the tax period has totally divested such assets. Moreover, compared with the past years, non-corporate residents are no longer (starting from the tax returns to be filed for fiscal year 2013), required to provide details in their income tax returns about transfers to, from, within and between foreign countries in connection with such assets during the fiscal year. No disclosure requirements exist for investments and financial activities under management or administration entrusted to Italian resident intermediaries and for contracts concluded through their intervention, provided that the cash flows and the income derived from such activities and contracts have been subject to Italian withholding or substitute tax by intermediaries themselves. No income tax return is required in respect of foreign investments and foreign income-earning assets that are exempt from income tax or subject to withholding tax in Italy. For corporate residents there is no requirement for such a declaration because their financial statements (on the basis of which their income tax returns are prepared) already contain the information.

There can be no assurance that the present regulatory environment in or outside Italy will endure or that particular policies presently in effect will be maintained, although Italy is required to maintain certain regulations and policies by virtue of its membership in the EU and other international organizations and its adherence to various bilateral and multilateral international agreements.

## 10.3 DESCRIPTION OF BYLAWS

***Object***

TIM s corporate purpose is described in Article 3 of the Bylaws and consists of the following activities:

- to install and operate fixed or mobile equipment and installations for the purpose of providing and operating telecommunications services and to carry out the activities directly or indirectly related thereto;
- to hold interests in other businesses falling within the scope of the above stated corporate object or otherwise related thereto; and
- to control and provide the strategic, technical, administrative and financial coordination, overseeing and managing the financial activities of controlled companies and businesses, and carrying out all transactions related thereto.

***Directors***

There are no provisions in the Bylaws relating to: (1) the power of a director to vote on a proposal in which such director is materially interested, (2) the power of a director to (in the absence of an independent quorum) vote compensation to himself or any member of its body, (3) the power of a director to borrow money from the Company, (4) the retirement of a director under an age limit requirement and (5) the number of shares required for director s qualification.

The Board of Directors grants specific positions to any of its members in compliance with the Bylaws of the company; such positions can include, among others, those of Chairman, Deputy Chairman and Managing Director. According to Italian law the remuneration corresponding to such positions is then defined by the Board of Directors in its discretion, after acknowledging the opinion of the Board of Auditors.

There are no provisions in Italian law that govern the issue of directors borrowing money from the company and that set age or shareholding requirements for director s qualification. According to Italian law, in case of an interest of directors in the transaction to be resolved upon by the Board, there are disclosure requirements, but abstention is not required. Disclosure of the interests of Directors in the transactions at stake is described in detail in the Company s Corporate Governance Principles and the rules of the Board.

## 10.4 DESCRIPTION OF CAPITAL STOCK

As of April 8, 2019, the subscribed and fully paid-up capital stock was equal to euros 11,677,002,855.10 divided into 15,203,122,583 Ordinary Shares and 6,027,791,699 Savings Shares, all without par value.

The Extraordinary Shareholders Meeting of May 20, 2015 approved the increase of the Company s share capital, with exclusion of the preferential subscription right pursuant to art. 2441, subsection 5 of the Italian Civil Code, of up to 2,000,000,000 euros (two billion), including any share premium, to service the conversion of the **2,000,000,000 1.125 per cent. Equity-Linked bonds due 2022** , through the issuance of ordinary shares of the Company with regular dividend entitlement, without prejudice to the fact that the final terms for subscription of the newly issued shares are established as March 26, 2022 and that if, as of that date, the share capital increase has not been fully subscribed, it will be increased by an amount equal to the subscriptions collected as of that date. No partial shares will be issued or delivered and no cash payment or adjustment will be made in lieu of said parts.

On March 23, 2017, the Board of Directors, by virtue of the powers granted by the Extraordinary Shareholders Meeting of April 16, 2014, resolved to increase the share capital by the maximum amount of 8,404,245.30 euros, through the issue of up to 15,280,446 new ordinary shares. These shares have a regular dividend entitlement, to be reserved to the assignees of 15,280,446 options under the scope of the 2014-2016 Stock Option Plan, with imputation to capital in the amount of 0.55 euros per share issued, at an issue price respectively of 0.94 euros, 0.99 euros, 1.01 euros or 1.15 euros, depending on when the respective options were assigned to each beneficiary. If not fully subscribed by March 24, 2020, the share capital will be increased by an amount equal to the subscriptions collected as at that date.

### *Classes of shares*

According to Italian law, Savings Shares may not be issued for an amount which, including other preferred shares, if any, exceeds one-half of the Company s share capital.

Pursuant to TIM s Bylaws any reduction in share capital made for the purpose of absorbing losses is applied to the fraction of capital represented by the Ordinary Shares until they have been reduced to zero and only then is the fraction of capital represented by the Savings Shares reduced. If, as a consequence of capital reduction, the Savings Shares exceed half of the Company s share capital, such excess must be eliminated within the following two years.

### *Form and Transfer*

The Dematerialization Decree provides for the dematerialization of financial instruments publicly traded on regulated markets, including shares.

As a result, Ordinary Shares and Savings Shares must be held with Monte Titoli. Most Italian banks, brokers and securities dealers have securities accounts as participants with Monte Titoli, and beneficial owners of Ordinary Shares and Savings Shares may hold their interests through special deposit accounts with any such participant. The beneficial owners of Ordinary Shares and Savings Shares held with Monte Titoli may transfer their Ordinary Shares, collect dividends and exercise other rights with respect to those shares through such accounts. Such shares held by Monte Titoli are transferred between beneficial owners by appropriate instructions being given to the relevant participants associated with Monte Titoli to debit the account with the bank of the vendor and to credit the account with the bank of the purchaser.

Voting rights relating to Ordinary Shares and Savings Shares that have not been deposited with Monte Titoli may be exercised only by depositing them with an authorized intermediary. The Company may act as an intermediary for its own shares.

Each person owning a beneficial interest in Ordinary Shares and Savings Shares held through Euroclear or Clearstream must rely on the procedures of Euroclear or Clearstream, respectively, and of institutions that have accounts with Euroclear or Clearstream to exercise any rights of a holder of shares. Holders may request Euroclear or Clearstream to transfer their Ordinary Shares and Savings Shares to an account of such holder with a participant of Monte Titoli, in which case such holders may transfer their shares, collect dividends and exercise other shareholder rights through that participant. Any such transfer through that participant is not subject to Italian transfer tax if non-Italian parties are involved. See 10.6 Taxation .

***Dividend Rights***

Holders of Savings Shares are entitled each year to a distribution with respect to such year s net income in the amount up to 5% of 0.55 euros per share (so called privilege). If with respect to any year a lesser amount is paid, the entitlement to payment of the shortfall is carried over for two successive years. In the event that dividends are paid to holders of Ordinary Shares, holders of Savings Shares have a preferential right to receive a dividend per share that is higher by 2% of 0.55 euros per share than the dividend per Ordinary Share (so called enhancement).

If the net income is insufficient, the annual shareholders meeting is allowed to satisfy both the aforementioned preferential rights (privilege and enhancement) by distributing reserves, when available.

***Subscription Rights***

New Ordinary Shares and/or Savings Shares may be issued pursuant to a resolution of holders of Ordinary Shares at any extraordinary Shareholders Meeting.

Pursuant to Italian law, shareholders (including holders of Savings Shares) are entitled to subscribe for new issues of Ordinary Shares and/or Savings Shares, debentures convertible into Ordinary Shares and/or Savings Shares and rights to subscribe for Ordinary Shares and/or Savings Shares in proportion to their respective shareholdings.

Nevertheless, subject to certain conditions principally designed to prevent dilution of the rights of shareholders, subscription rights may be waived or limited by resolutions taken by the extraordinary Shareholders Meeting. On the other hand, according to the Bylaws the subscription rights can be excluded by the extraordinary Shareholders Meeting in the amount of 10% of the pre-existent share capital with no special quorum or disclosure requirement, on condition that the subscription price is equal to the shares market price and this is confirmed in the proper independent auditors report.

Shareholders can adopt a resolution, at an extraordinary Shareholders Meeting, to convert available reserves into additional share capital. In such case, either the fraction of capital represented by all outstanding shares is identically raised or the shares resulting from the increase in share capital are allocated to the shareholders in proportion to their ownership before the increase without further contribution or payment from the shareholder.

***Liquidation Rights***

Subject to the satisfaction of all other creditors, holders of Ordinary Shares are entitled to a distribution in liquidation.

Holders of Savings Shares and preferred shares, if any, are entitled to a preferred right to distribution from liquidation up to 0.55 euros per share. No liquidation dividend is payable to the holders of other classes of shares until such preferential right has been satisfied in full. Thereafter, in case of surplus assets, holders of all classes of shares rank equally in the distribution of such surplus assets. Shares rank pari passu among themselves in a liquidation.

***Purchase of Ordinary Shares or Savings Shares by the Company***

The Company may purchase its own Ordinary Shares or Savings Shares subject to certain conditions and limitations. Such purchases must be authorized by a Shareholders Meeting and made only out of retained earnings or distributable reserves as shown on the most recent financial statements approved by the Shareholders Meeting. The fraction of capital represented by the Ordinary Shares or Savings Shares purchased by the Company, including the Ordinary Shares or Savings Shares, if any, held by the Company s subsidiaries, may not exceed 10% of the Company s share capital. The Company may purchase its own Ordinary Shares or Savings Shares:

· by means of a tender offer;

· on regulated markets in accordance with trading methods laid down in the market rules, that do not permit the direct matching of buy orders with predetermined sell orders;

· by means of the purchase and sale of derivative instruments traded on regulated markets that provide for the delivery of the underlying shares, provided the market rules lay down methods for the purchase and sale of such instruments that (i) do not permit the direct matching of buy orders with predetermined sell orders and (ii) ensure the easy participation of investors in the trading of such derivative instruments used for buybacks;

· by granting shareholders, in relation to the shares they hold, a put option to be exercised within a period established by the shareholders meeting authorizing the share purchase program.

Before entering into transactions aimed at the purchase of its own shares other than by means of a tender offer (which in Italy is governed by specific disclosure requirements), the Company must disclose to the public all the details of the share purchase program.

Ordinary Shares or Savings Shares purchased and held by the Company or one of its subsidiaries may be disposed of only pursuant to a resolution of the Company s or, if applicable, its subsidiary s shareholders meeting.

As a rule, neither the Company nor any company under its control may vote or subscribe for new Ordinary Shares or Savings Shares of the Company, but the shareholders meeting may authorize the exercise of subscription rights. If no such authorization is granted, the subscription rights accrue to the other holders so long as such Ordinary Shares or Savings Shares are held by the Company or a company under its control. The Ordinary Shares or the Savings Shares, as long as they are owned by the Company, are not entitled to receive dividends.

As of April 8, 2019, TIM owns 37,672,014 of its own Ordinary Shares, while the subsidiary Telecom Italia Finance S.A. holds another 126,082,374 Ordinary Shares, for a total of 1.08% of capital with voting rights.

***Reporting Requirements and Restrictions on Acquisitions of Shares***

Pursuant to Italian securities regulations any acquisition or sale of an interest in excess of 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50%, 66.6%, 90% of the voting shares of a listed company, must be notified to the listed company and to Consob within four trading days (defined as days on which Borsa Italiana is open) following the acquisition or sale. Consob must make such information public within three trading days from the notification.

For the purpose of the aforementioned disclosure obligations, shares of which a party is the principal, even if the voting rights are due or assigned to third parties or suspended, are considered as investments. Shares in relation to which a party is assigned or due voting rights are also considered investments where one of the following criteria or a combination of such, is met: (i) voting rights due as pledgee or usufructuary; (ii) voting rights due as depositary or third party account holder, as long as this right can be exercised at discretion; (iii) voting rights due by virtue of power of attorney, as long as the right can be exercised at discretion with no specific instructions by the delegating party; (iv) voting rights due on the basis of an agreement envisaging the provisional, paid transfer of it.

The disclosure obligations envisaged above shall also apply to the treasury shares held directly or via subsidiary companies. In the event of shares subject to security lending or contango transactions, the disclosure obligation is both the lender or the contango payer s and the borrower or the contango broker s. For the same disclosure obligation, shall also be included both the shares owned by nominees, trustees or subsidiary companies and the shares of which the voting rights belong or are assigned to such persons.

Shareholder agreements concerning the voting shares of a listed company must be notified to Consob, published in abridged form in the daily press and filed with the Company Register of the place where the company has its registered office if they provide for duties of consultation before voting, set limits on the transfer or provide for the purchase of the relevant shares, have as their object or effect the exercise of a dominant influence on the company, aim to encourage or frustrate a takeover bid or equity swap, including commitments relating to non-participation in a takeover bid. The same rule applies when the shareholder agreements concern the shares issued by a non-listed company that controls a listed company. The notification must include the share ownership of all parties filing it.

When listed companies change their share capital, they must notify Consob and Borsa Italiana of the amount of the share capital and the number and classes of shares into which it is divided. Consob and Borsa Italiana must make the information available to the public no later than the day following the notification. The notification shall be made no later than the day following the event causing such modification or the day following the filing of the amended Bylaws.

In accordance with Italian antitrust laws and regulations, the Antitrust Authority is required to prohibit acquisitions of sole or joint control over a company that would create or strengthen a dominant position in the domestic market or a significant part thereof. However, if the acquiring party and the company to be acquired operate in more than one Member State of the EU and exceed certain revenue thresholds, the antitrust approval of the acquisition falls within the exclusive jurisdiction of the European Commission. See Item 4. Information on the TIM Group 4.3 Regulation .

***Limitations on Voting and Shareholdings***

There are no limitations imposed by Italian law or by the Bylaws of TIM on the rights of non-residents of Italy or foreign persons to hold or vote the Ordinary Shares other than those limitations resulting from the special powers of the State.

## 10.5 DESCRIPTION OF AMERICAN DEPOSITARY RECEIPTS

Following the Merger, Olivetti as the surviving company changed its name to TIM S.p.A. , succeeded to the Exchange Act registration of Old TIM and became subject to the foreign private issuer reporting requirements of the Exchange Act. TIM completed the listing of its Ordinary Share American Depositary Shares and Savings Share American Depositary Shares on the New York Stock Exchange. TIM has entered into two Deposit Agreements among the Company, JPMorgan Chase Bank, as Depositary, and the registered Holders from time to time of ADRs issued thereunder. The first such Deposit Agreement, dated as of November 16, 2017, provides for the deposit of Ordinary Shares in registered form, with no par value and the issuance of the Ordinary Share ADSs; the second such Deposit Agreement, also dated as of November 16, 2017 provides for the deposit of Savings Shares in registered form, with no par value and the issuance of the Savings Share ADSs. Because these agreements are otherwise substantially identical, such agreements (including all exhibits and amendments thereto) are referred to herein as the Deposit Agreement , deposited Shares as well as deposited Savings Shares are referred to as Shares , and the Ordinary Share ADSs or Savings Share ADSs, as the case may be, are referred to as the ADSs . The following is a summary of the material provisions of the Deposit Agreement. This summary does not purport to be complete and is qualified in its entirety by reference to the Deposit Agreement. Copies of the Deposit Agreement are available for inspection at the principal office of the Depositary in New York (the Principal New York Office ), which is presently located at 4 New York Plaza, New York, New York 10004. Terms used herein and not otherwise defined shall have the respective meanings set forth in the Deposit Agreement.

ADRs evidencing ADSs are issuable by the Depositary pursuant to the terms of the Deposit Agreement. Each ADS represents, as of the date hereof, the right to receive 10 Ordinary Shares (in the case of each Ordinary Share ADS) or 10 Savings Shares (in the case of each Savings Share ADS) in each case deposited under the Deposit Agreement (together with any additional Ordinary Shares deposited thereunder and all other securities, property and cash received and held thereunder at any time in respect of or in lieu of such deposited Ordinary Shares, the Deposited Securities ) with the Custodian, currently the Milan office of BNP Paribas (together with any successor or successors thereto, the Custodian ). An ADR may evidence any number of ADSs. Only persons in whose names ADRs are registered on the books of the Depositary will be treated by the Depositary and the Company as Holders.

### Deposit, Issuance, Transfer and Withdrawal

In connection with the deposit of Shares in accordance with the Deposit Agreement, the Depositary or the Custodian may require the following in a form satisfactory to it: (a) a written order directing the Depositary to issue to, or upon the written order of, the person or persons designated in such order a Direct Registration ADR or ADRs evidencing the number of ADSs representing such deposited Shares (a Delivery Order ); (b) proper endorsements or duly executed instruments of transfer in respect of such deposited Shares; (c) instruments assigning to the Depositary, the Custodian or a nominee of either any distribution on or in respect of such deposited Shares or indemnity therefor; and (d) proxies entitling the Depositary or the Custodian to vote such deposited Shares. As soon as practicable after the Custodian receives Deposited Securities pursuant to any such deposit or pursuant to the terms and conditions of the Deposit Agreement of the form of ADR, the Custodian shall present such Deposited Securities for registration of transfer into the name of the Depositary, the Custodian or a nominee of either, to the extent such registration is practicable, at the cost and expense of the person making such deposit (or for whose benefit such deposit is made) and shall obtain evidence satisfactory to it of such registration. Deposited Securities shall be held by the Custodian for the account and to the order of the Depositary for the benefit of Holders of ADRs (to the extent not prohibited by law) at such place or places and in such manner as the Depositary shall determine. Deposited Securities may be delivered by the Custodian to any person only under the circumstances expressly contemplated in the Deposit Agreement. To the extent that the provisions of or governing the Shares make delivery of certificates therefor impracticable, Shares may be deposited by such delivery thereof as the Depositary or the Custodian may reasonably accept, including, without limitation, by causing them to be credited to an account maintained by the Custodian for such purpose with the Company or an accredited intermediary, such as a bank, acting as a registrar for the Shares, together with delivery of the documents, payments and Delivery Order referred to in the Deposit Agreement to the Custodian or the Depositary.

After any such deposit of Shares, the Custodian shall notify the Depositary of such deposit and of the information contained in any related Delivery Order by letter, first class airmail postage prepaid, or, at the request, risk and expense of the person making the deposit, by SWIFT, cable, telex or facsimile transmission. After receiving such notice from the Custodian, the Depositary, subject to the Deposit Agreement, shall properly issue at the Transfer Office, to or upon the order of any person named in such notice, an ADR or ADRs registered as requested and evidencing the aggregate ADSs to which such person is entitled.

Subject to the other provisions of the Deposit Agreement, the Depositary may so issue ADRs for delivery at the Transfer Office (as defined in the Deposit Agreement) only against deposit of: (a) Shares in a form satisfactory to the Custodian; (b) rights to receive Shares from the Company or any registrar, transfer agent, clearing agent or other entity recording Share ownership or transactions; or (c) in accordance with the next paragraph.

In its capacity as Depositary, the Depositary shall not lend Deposited Securities; provided, however, that, unless requested by the Company to cease doing so during periods necessary in order to enable compliance with applicable law, the Depositary may issue ADSs prior to the receipt of Shares (each such transaction a Pre-Release ). The Depositary may receive ADSs in lieu of Shares (which ADSs will promptly be canceled by the Depositary upon receipt by the Depositary). Each such Pre-Release will be subject to a written agreement whereby the person or entity (the Applicant ) to whom ADSs are to be delivered (a) represents that at the time of the Pre-Release the Applicant or its customer owns the Shares that are to be delivered by the Applicant under such Pre-Release, (b) agrees to indicate the Depositary as owner of such Shares in its records and to hold such Shares or ADSs in trust for the Depositary until such Shares or ADSs are delivered to the Depositary or the Custodian, (c) unconditionally guarantees to deliver to the Depositary or the Custodian, as applicable, such Shares, and (d) agrees to any additional restrictions or requirements that the Depositary deems appropriate. Each such Pre-Release will be at all times fully collateralized with cash, U.S. government securities or such other collateral as the Depositary deems appropriate, terminable by the Depositary on not more than five (5) business days notice and subject to such further indemnities and credit regulations as the Depositary deems appropriate. The Depositary will normally limit the number of ADSs involved in such Pre-Release at any one time to thirty percent (30%) of the ADSs outstanding (without giving effect to Pre-Released ADSs outstanding), provided, however, that the Depositary reserves the right to change or disregard such limit from time to time as it deems appropriate. The Depositary may also set limits with respect to the number of ADSs involved in Pre-Release with any one person on a case-by-case basis as it deems appropriate. The Depositary may retain for its own account any compensation received by it in conjunction with the foregoing. Collateral provided in connection with Pre-Release transactions, but not the earnings thereon, shall be held for the benefit of the Holders (other than the Applicant).

At the request, risk and expense of the person depositing Shares, the Depositary may accept deposits for forwarding to the Custodian and may deliver ADRs at a place other than its office. Shares or evidence of rights to receive Shares may be deposited through (x) electronic transfer of such Shares to the account maintained by the Custodian for such purpose at Monte Titoli S.p.A., (y) evidence satisfactory to the Custodian of irrevocable instructions to cause such Shares to be transferred to such account or (z) delivery of the certificates representing such Shares. If use of the Monte Titoli book-entry system in connection with the Shares is discontinued at any time for any reason, the Company shall make other book-entry arrangements (if any) that it determines, after consultation with the Depositary, are reasonable.

Every person depositing Shares under the Deposit Agreement represents and warrants that (a) such Shares and the certificates therefor are duly authorized, validly issued and outstanding, fully paid, non-assessable and legally obtained by such person (b) all pre-emptive and comparable rights, if any, with respect to such Shares have been validly waived or exercised, (c) the person making such deposit is duly authorized so to do, (d) the Shares presented for deposit are free and clear of any lien, encumbrance, security interest, charge, mortgage or adverse claim and

(e) such Shares (A) are not restricted securities as such term is defined in Rule 144 under the Securities Act of 1933 ( Restricted Securities ) unless at the time of deposit the requirements of paragraphs (c), (e), (f) and (h) of Rule 144 shall not apply and such Shares may be freely transferred and may otherwise be offered and sold freely in the United States or (B) have been registered under the Securities Act of 1933. To the extent the person depositing Shares is an affiliate of the Company as such term is defined in Rule 144, the person also represents and warrants that upon the sale of the ADSs, all of the provisions of Rule 144 which enable the Shares to be freely sold (in the form of ADSs) will be fully complied with and, as a result thereof, all of the ADSs issued in respect of such Shares will not be on the sale thereof, Restricted Securities. Such representations and warranties shall survive the deposit and withdrawal of Shares and the issuance and cancellation of ADSs in respect thereof and the transfer of such ADSs. The Depositary may refuse to accept for such deposit any Shares

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identified by the Company in order to facilitate compliance with the requirements of the Securities Act of 1933 or the Rules made thereunder. The Depositary will not knowingly accept for deposit under the Deposit Agreement any Shares required to be registered under the Securities Act of 1933 and not so registered.

Subject to the terms and conditions of the Deposit Agreement, upon surrender of (i) a certificated ADR in a form satisfactory to the Depositary at the Transfer Office or (ii) proper instructions and documentation in the case of a Direct Registration ADR, the Holder is entitled to delivery at, or to the extent in dematerialized form from, the Custodian s office of the Deposited Securities at the time represented by the ADSs evidenced by the ADR, provided that the Depositary may deliver Shares prior to the receipt of ADSs for withdrawal of Deposited Securities, including ADSs which were issued as per above but for which Shares may not have been received (until such ADSs are actually deposited, Pre-released Shares ) only if all the conditions in the Deposit Agreement related to such Pre-Release are satisfied). At the request, risk and expense of the Holder hereof, the Depositary may deliver such Deposited Securities at such other place as may have been requested by the Holder. Notwithstanding any other provision of the Deposit Agreement or the ADR, the withdrawal of Deposited Securities may be restricted only for the reasons set forth in General Instruction I.A.(1) of Form F-6 (as such instructions may be amended from time to time) under the Securities Act of 1933.

**Distributions on Deposited Securities**

Subject to the terms and conditions of the Deposit Agreement, to the extent practicable, the Depositary will distribute to each Holder entitled thereto on the record date set by the Depositary therefor at such Holder s address shown on the ADR Register, in proportion to the number of Deposited Securities (on which the following distributions on Deposited Securities are received by the Custodian) represented by ADSs evidenced by such Holder s ADRs: (a) Cash. Any U.S. dollars available to the Depositary resulting from a cash dividend or other cash distribution or the net proceeds of sales of any other distribution or portion thereof authorized in this paragraph ( Cash ), on an averaged or other practicable basis, subject to (i) appropriate adjustments for taxes withheld, (ii) such distribution being impermissible or impracticable with respect to certain Holders, and (iii) deduction of the Depositary s and/or its agents fees and expenses in (1) converting any foreign currency to U.S. dollars by sale or in such other manner as the Depositary may determine to the extent that it determines that such conversion may be made on a reasonable basis, (2) transferring foreign currency or U.S. dollars to the United States by such means as the Depositary may determine to the extent that it determines that such transfer may be made on a reasonable basis, (3) obtaining any approval or license of any governmental authority required for such conversion or transfer, which is obtainable at a reasonable cost and within a reasonable time and (4) making any sale by public or private means in any commercially reasonable manner. (b) Shares. (i) Additional ADRs evidencing whole ADSs representing any Shares available to the Depositary resulting from a dividend or free distribution on Deposited Securities consisting of Shares (a Share Distribution ) and (ii) U.S. dollars available to it resulting from the net proceeds of sales of Shares received in a Share Distribution, which Shares would give rise to fractional ADSs if additional ADRs were issued therefor, as in the case of Cash. (c) Rights. (i) Warrants or other instruments in the discretion of the Depositary representing rights to acquire additional ADRs in respect of any rights to subscribe for additional Shares or rights of any nature available to the Depositary as a result of a distribution on Deposited Securities ( Rights ), to the extent that the Company timely furnishes to the Depositary evidence satisfactory to the Depositary that the Depositary may lawfully distribute the same (the Company has no obligation to so furnish such evidence), or (ii) to the extent the Company does not so furnish such evidence and sales of Rights are practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Rights as in the case of Cash, or (iii) to the extent the Company does not so furnish such evidence and such sales cannot practicably be accomplished by reason of the non-transferability of the Rights, limited markets therefor, their short duration or otherwise, nothing (and any Rights may lapse). (d) Other Distributions. (i) Securities or property available to the Depositary resulting from any distribution on Deposited Securities other than Cash, Share Distributions and Rights ( Other Distributions ), by any means that the Depositary may deem equitable and practicable, or (ii) to the extent the Depositary deems distribution of such securities or property not to be equitable and practicable, any U.S. dollars available to the Depositary from the net proceeds of sales of Other Distributions as in the case of Cash. The Depositary reserves the right to utilize a division, branch or affiliate of JPMorgan Chase Bank, N.A. to direct, manage and/or execute any public and/or private sale of securities hereunder. Such division, branch and/or affiliate may charge the Depositary a fee in connection with such sales, which fee is considered an expense of the Depositary contemplated above and/or according to the terms and conditions of the Deposit Agreement. Any U.S. dollars available will be distributed by checks drawn on a bank in the United States for whole dollars and cents. Fractional cents will be withheld without liability and dealt with by the Depositary in accordance with its then current practices. All purchases and sales of securities will be handled by the Depositary in accordance with its then current policies, which are currently set forth in the Depositary Receipt Sale and Purchase of Security section of https://www.adr.com/Investors/FindOutAboutDRs, the location and contents of which the Depositary shall be solely responsible for.

**Disclosure of Interests**

To the extent that the provisions of or governing any Deposited Securities may require disclosure of or impose limits on beneficial or other ownership of Deposited Securities, other Shares and other securities and may provide for blocking transfer, voting or other rights to enforce such disclosure or limits, Holders and all persons holding ADRs agree to comply with all such disclosure requirements and ownership limitations and to comply with any reasonable Company instructions in respect thereof. The Company reserves the right to instruct Holders to deliver their ADSs for cancellation and withdrawal of the Deposited Securities so as to permit the Company to deal directly with the Holder thereof as a holder of Shares and Holders agree to comply with such instructions. The Depositary agrees to cooperate with the Company in its efforts to inform Holders of the Company s exercise of its rights under this paragraph and agrees to consult with, and provide reasonable assistance without risk, liability or expense on the part of the Depositary, to the Company on the manner or manners in which it may enforce such rights with respect to any Holder.

**Record Dates**

The Depositary may, after consultation with the Company if practicable, fix a record date (which, to the extent applicable, shall be as near as practicable to any corresponding record date set by the Company) for the determination of the Holders who shall be responsible for the fee assessed by the Depositary for administration of the ADR program and for any expenses according to the terms and conditions of the Deposit Agreement as well as for the determination of the Holders who shall be entitled to receive any distribution on or in respect of Deposited Securities, to give instructions for the exercise of any voting rights, to receive any notice or to act in respect of other matters and only such Holders shall be so entitled or obligated.

**Voting of Deposited Securities**

Subject to the next sentence, as soon as practicable after receipt of notice of any meeting at which the holders of Shares are entitled to vote, or of solicitation of consents or proxies from holders of Shares or other Deposited Securities, the Depositary shall fix the ADS record date in accordance with the terms and conditions of the Deposit Agreement in respect of such meeting or solicitation of consent or proxy. The Depositary shall, if requested by the Company in writing in a timely manner (the Depositary having no obligation to take any further action if the request shall not have been received by the Depositary at least 30 days prior to the date of such vote or meeting) and at the Company s expense and provided no legal prohibitions exist, distribute to Holders a notice stating (a) such information as is contained in such notice and any solicitation materials, (b) that each Holder on the record date set by the Depositary therefor will, subject to any applicable provisions of Italian law and of the Company s Certificate of Incorporation and By-laws, be entitled to instruct the Depositary as to the exercise of the voting rights, if any, pertaining to the Deposited Securities represented by the ADSs evidenced by such Holder s ADRs; (c) if applicable, a statement as to the manner in which such Holders may request a certificate for such meeting attesting that beneficial ownership of the related Shares is in the name of the Holders and therefore enabling them to exercise voting rights with respect to the Shares represented by their ADSs without the use of Voting Proxy Cards as defined hereinafter (the

Certificate ) (d) if applicable, a proxy card (the Voting Proxy Card ) pursuant to which such Holder may appoint the Depositary (with power of substitution) as his or her proxy to vote at such meeting in accordance with the directions set out in such Voting Proxy Card as hereinafter described, and (e) such other information, including any such modification to the foregoing procedures as agreed between the Depositary and the Company.

The Voting Proxy Card will, among other things, require the Holder to set forth its name and the number of such Holder s ADSs, authorize the Depositary (or the broker, custodian or other nominee holding such Holders ADRs) to prohibit any transfers of Shares evidenced by such ADRs for a period of time (i) as set forth by applicable provisions (if any) of Italian laws and regulations and/or applicable provisions (if any) of the Company s

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Certificate of Incorporation and By-laws and in any case (ii) beginning from the issuance of the Certificate for such meeting and ending at the end of the day on the date upon which such meeting is held with a quorum (the Blocked Period ) and authorize the Depositary to request the Custodian to cause the name and address of such Holder to be registered in the Share register of the Company during such Blocked Period and to issue or cause to be issued a Certificate for such meeting during such Blocked Period in respect of the number of Shares represented by such Holder s ADSs.

Upon actual receipt by the ADR department of the Depositary of instructions of a Holder on such record date in the manner and on or before the time established by the Depositary for such purpose, the Depositary shall endeavor insofar as practicable and permitted under any applicable provisions of Italian law and the Company s Certificate of Incorporation and By-laws to vote or cause to be voted the Shares represented by the ADSs evidenced by such Holder s ADRs in accordance with any nondiscretionary instructions set forth in such Voting Proxy Card. Voting instructions will not be deemed received until such time as the ADR department responsible for proxies and voting has received such instructions notwithstanding that such instructions may have been physically received by JPMorgan Chase Bank, N.A., as Depositary, prior to such time.

A Holder desiring to exercise voting rights with respect to the Shares represented by its ADSs without the use of Voting Proxy Cards may do so by (A) depositing its ADRs in a blocked account with the Depositary until the completion of such meeting and (B) instructing the Depositary to (x) furnish the Custodian with the name and address of such Holder, the number of ADSs represented by ADRs held by such Holder and any other information required in accordance with Italian law or the Company s Certificate of Incorporation and By-laws, (y) notify the Custodian of such deposit, and (z) instruct the Custodian to issue a Certificate for such meeting, and to give notice to the Company of such Holder s intention to vote the Shares underlying its ADRs. By giving the instructions set forth under point (B) above, Holders will be deemed to have authorized the Custodian to prohibit any transfers of the related Shares for the Blocked Period. Each Holder understands and agrees that a precondition for the issue of the Certificate for a specific meeting by the Custodian may be that beneficial ownership of the related Shares has been in the name of the Holder for a specific number of days prior to the date of the meeting according to applicable provisions (if any) of Italian laws and regulations and/or applicable provisions (if any) of the Company s Certificate of Incorporation and By-laws.

Under Italian law, shareholders at shareholders meetings may modify the resolutions presented for their approval by the Board of Directors. In such case Holders who have given prior instructions to vote on such resolutions, and whose instructions do not provide for the case of amendments or additions to such resolutions, will be deemed to have elected to have abstained from voting on any such revised resolution.

Notwithstanding the foregoing, the Depositary is instructed to also allow Holders to electronically or telephonically provide the information required and/or sought in a Voting Proxy Card and to electronically or telephonically provide voting instructions with respect to any meeting of shareholders. Any such electronic and/or telephonic instructions shall be valid if timely received by the Depositary.

The Depositary will not itself exercise any voting discretion in respect of any Deposited Securities.

There can be no assurance that Holders generally or any Holder in particular will receive the notice described above with sufficient time to enable the Holder to return voting instructions to the Depositary in a timely manner.

Notwithstanding anything contained in the Deposit Agreement or any ADR, the Depositary may, to the extent not prohibited by law or regulations, or by the requirements of the stock exchange on which the ADSs are listed, in lieu of distribution of the materials provided to the Depositary in connection with any meeting of, or solicitation of consents or proxies from, holders of Deposited Securities, distribute to the Holders a notice that provides Holders with, or otherwise publicizes to Holders, instructions on how to retrieve such materials or receive such materials upon request (i.e., by reference to a website containing the materials for retrieval or a contact for requesting copies of the materials). Holders are requested to forward their voting instructions as soon as possible and in any event prior to the deadline established from time to time.

**Inspection of Transfer Books**

The Depositary or its agent will keep, at a designated transfer office (the Transfer Office ), (a) a register (the ADR Register ) for the registration, registration of transfer, combination and split-up of ADRs, and, in the case of

**Item 10. Additional Information** **Description Of American Depositary Receipts**

Direct Registration ADRs, shall include the Direct Registration System, which at all reasonable times will be open for inspection by Holders and the Company for the purpose of communicating with Holders in the interest of the business of the Company or a matter relating to the Deposit Agreement.

**Reports and Available Information**

The Deposit Agreement, the provisions of or governing Deposited Securities and any written communications from the Company, which are both received by the Custodian or its nominee as a holder of Deposited Securities and made generally available to the holders of Deposited Securities, are available for inspection by Holders at the offices of the Depositary and the Custodian and at the Transfer Office. The Depositary will distribute copies of such communications (or English translations or summaries thereof) to Holders when furnished by the Company. The Company is subject to the periodic reporting requirements of the Securities Exchange Act of 1934 and accordingly files certain reports with the United States Securities and Exchange Commission (the Commission ). Such reports and other information may be inspected and copied through the Commission s EDGAR system or at public reference facilities maintained by the Commission located at the date hereof at 100 F Street, NE, Washington, DC 20549.

On or before the first date on which the Company makes any communication available to holders of Deposited Securities or any securities regulatory authority or stock exchange, by publication or otherwise, the Company shall transmit to the Depositary a copy thereof in English or with an English translation or summary. The Company has delivered to the Depositary, the Custodian and any Transfer Office, a copy of all provisions (other than copies of Italian laws and/or regulations) of or governing the Shares and any other Deposited Securities issued by the Company and, promptly upon any change thereto, the Company shall deliver to the Depositary, the Custodian and any Transfer Office, a copy (in English or with an English translation) of such provisions (other than copies of Italian laws and/or regulations) as so changed. The Depositary and its agents may rely upon the Company s delivery of all such communications, information and provisions for all purposes of the Deposit Agreement and the Depositary shall have no liability for the accuracy or completeness of any thereof.

**Changes Affecting Deposited Securities**

Subject to the terms and conditions of the Deposit Agreement, the Depositary may, in its discretion, and shall if reasonably requested by the Company, amend the ADR or distribute additional or amended ADRs (with or without calling the ADR for exchange) or cash, securities or property on the record date set by the Depositary therefor to reflect any change in par value, split-up, consolidation, cancellation or other reclassification of Deposited Securities, any Share Distribution or Other Distribution not distributed to Holders or any cash, securities or property available to the Depositary in respect of Deposited Securities from (and the Depositary is hereby authorized to surrender any Deposited Securities to any person and, irrespective of whether such Deposited Securities are surrendered or otherwise cancelled by operation of law, rule, regulation or otherwise, to sell by public or private sale any property received in connection with) any recapitalization, reorganization, merger, consolidation, liquidation, receivership, bankruptcy or sale of all or substantially all the assets of the Company, and to the extent the Depositary does not so amend the ADR or make a distribution to Holders to reflect any of the foregoing, or the net proceeds thereof, whatever cash, securities or property results from any of the foregoing shall constitute Deposited Securities and each ADS evidenced by the ADR shall automatically represent its pro rata interest in the Deposited Securities as then constituted. Promptly upon the occurrence of any of the aforementioned changes affecting Deposited Securities, the Company shall notify the Depositary in writing of such occurrence and as soon as practicable after receipt of such notice from the Company, may instruct the Depositary to give notice thereof, at the Company s expense, to Holders in accordance with the provisions hereof. Upon receipt of such instruction, the Depositary shall give notice to the Holders in accordance with the terms thereof, as soon as reasonably practicable.

**Amendment and Termination of Deposit Agreement**

Subject to the terms and conditions of the Deposit Agreement, the ADRs and the Deposit Agreement may be amended by the Company and the Depositary, provided that any amendment that imposes or increases any fees or charges (other than stock transfer or other taxes and other governmental charges, transfer or registration fees, SWIFT, cable, telex or facsimile transmission costs, delivery costs or other such expenses), or that shall otherwise prejudice any substantial existing right of Holders, shall become effective 30 days after notice of such amendment shall have been given to the Holders. Every Holder of an ADR at the time any amendment to the Deposit Agreement so becomes effective shall be deemed, by continuing to hold such ADR, to consent and agree to such amendment and to be bound by the Deposit Agreement and the ADRs as amended thereby. In no event shall any amendment impair the right of the Holder of any ADR to surrender such ADR and receive the Deposited Securities represented thereby, except in order to comply with mandatory provisions of applicable law. Any amendments or supplements which (i) are reasonably necessary (as agreed by the Company and the Depositary) in order for (a) the ADSs to be registered on Form F-6 under the Securities Act of 1933 or (b) the ADSs or Shares to be traded solely in electronic book-entry form and (ii) do not in either such case impose or increase any fees or charges to be borne by Holders, shall be deemed not to prejudice any substantial rights of Holders. Notwithstanding the foregoing, if any governmental body or regulatory body should adopt new laws, rules or regulations which would require amendment or supplement of the Deposit Agreement or the form of ADR to ensure compliance therewith, the Company and the Depositary may amend or supplement the Deposit Agreement and the ADR at any time in accordance with such changed laws, rules or regulations. Such amendment or supplement to the Deposit Agreement in such circumstances may become effective before a notice of such amendment or supplement is given to Holders or within any other period of time as required for compliance. Notice of any amendment to the Deposit Agreement or form of ADRs shall not need to describe in detail the specific amendments effectuated thereby, and failure to describe the specific amendments in any such notice shall not render such notice invalid, provided, however, that, in each such case, the notice given to the Holders identifies a means for Holders to retrieve or receive the text of such amendment (i.e., upon retrieval from the U.S. Securities and Exchange Commission s, the Depositary s or the Company s website or upon request from the Depositary).

The Depositary may, and shall at the written direction of the Company, terminate the Deposit Agreement and the ADR by mailing notice of such termination to the Holders at least 30 days prior to the date fixed in such notice for such termination; provided, however, if the Depositary shall have resigned or shall have been removed as Depositary hereunder, notice of such termination by the Depositary shall not be provided to Holders unless a successor depositary shall not be operating hereunder within 60 days of the date of such resignation or the Company s written notice of removal. After the date so fixed for termination, the Depositary and its agents will perform no further acts under the Deposit Agreement and the ADR, except to receive and hold (or sell) distributions on Deposited Securities and deliver Deposited Securities being withdrawn. As soon as practicable after the expiration of six months from the date so fixed for termination, the Depositary shall sell the Deposited Securities and shall thereafter (as long as it may lawfully do so) hold in a segregated account the net proceeds of such sales, together with any other cash then held by it under the Deposit Agreement, without liability for interest, in trust for the pro rata benefit of the Holders of ADRs not theretofore surrendered. After making such sale, the Depositary shall be discharged from all obligations in respect of the Deposit Agreement and the ADR, except to account for such net proceeds and other cash. After the date so fixed for termination, the Company shall be discharged from all obligations under the Deposit Agreement except for its obligations to the Depositary and its agents.

**Appointment**.

Each Holder and each person holding an interest in ADSs, upon acceptance of any ADSs (or any interest therein) issued in accordance with the terms and conditions of the Deposit Agreement shall be deemed for all purposes to (a) be a party to and bound by the terms of the Deposit Agreement and the applicable ADR(s), and (b) appoint the Depositary its attorney-in-fact, with full power to delegate, to act on its behalf and to take any and all actions contemplated in the Deposit Agreement and the applicable ADR(s), to adopt any and all procedures necessary to comply with applicable law and to take such action as the Depositary in its sole discretion may deem necessary or appropriate to carry out the purposes of the Deposit Agreement and the applicable ADR(s), the taking of such actions to be the conclusive determinant of the necessity and appropriateness thereof.

**Charges of Depositary**

The Depositary may charge, and collect from, (i) each person to whom ADSs are issued, including, without limitation, issuances against deposits of Shares, issuances in respect of Share Distributions, Rights and Other Distributions (as such terms are defined in the Deposit Agreement), issuances pursuant to a stock dividend or stock split declared by the Company, or issuances pursuant to a merger, exchange of securities or any other

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transaction or event affecting the ADSs or the Deposited Securities, and (ii) each person surrendering ADSs for withdrawal of Deposited Securities or whose ADSs are cancelled or reduced for any other reason, U.S.$5.00 for each 100 ADSs (or portion thereof) issued, delivered, reduced, cancelled or surrendered (as the case may be). The Depositary may sell (by public or private sale) sufficient securities and property received in respect of Share Distributions, Rights and Other Distributions prior to such deposit to pay such charge. The following additional charges shall be incurred by the Holders, by any party depositing or withdrawing Shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuances pursuant to a stock dividend or stock split declared by the Company or an exchange of stock regarding the ADSs or the Deposited Securities or a distribution of ADSs pursuant to the terms and conditions of the Deposit Agreement), whichever is applicable (i) a fee of U.S.$0.05 or less per ADS for any Cash distribution made pursuant to the Deposit Agreement, (ii) a fee of U.S.$1.50 per ADR or ADRs for transfers made pursuant to the Deposit Agreement, (iii) a fee for the distribution or sale of securities pursuant to the Deposit Agreement, such fee being in an amount equal to the fee for the execution and delivery of ADSs referred to above which would have been charged as a result of the deposit of such securities (for purposes of this paragraph treating all such securities as if they were Shares) but which securities or the net cash proceeds from the sale thereof are instead distributed by the Depositary to Holders entitled thereto, (iv) an aggregate fee of U.S.$0.05 per ADS per calendar year (or portion thereof) for services performed by the Depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against Holders as of the record date or record dates set by the Depositary during each calendar year and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions), and (v) a fee for the reimbursement of such fees, charges and expenses as are incurred by the Depositary and/or any of its agents (including, without limitation, the Custodian and expenses incurred on behalf of Holders in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the Shares or other Deposited Securities, the sale of securities (including, without limitation, Deposited Securities), the delivery of Deposited Securities or otherwise in connection with the Depositary s or its Custodian s compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against Holders as of the record date or dates set by the Depositary and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions). The Company will pay all other charges and expenses of the Depositary and any agent of the Depositary (except the Custodian) pursuant to agreements from time to time between the Company and the Depositary, except (i) stock transfer or other taxes and other governmental charges (which are payable by Holders or persons depositing Shares), (ii) SWIFT, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or Holders delivering Shares, ADRs or Deposited Securities (which are payable by such persons or Holders), (iii) transfer or registration fees for the registration or transfer of Deposited Securities on any applicable register in connection with the deposit or withdrawal of Deposited Securities (which are payable by persons depositing Shares or Holders withdrawing Deposited Securities; there are no such fees in respect of the Shares as of the date of the Deposit Agreement), and (iv) in connection with the conversion of foreign currency into U.S. dollars, JPMorgan Chase Bank, N.A. ( JPMorgan ) shall deduct out of such foreign currency the fees, expenses and other charges charged by it and/or its agent (which may be a division, branch or affiliate) so appointed in connection with such conversion. JPMorgan and/or its agent may act as principal for such conversion of foreign currency. Such charges may at any time and from time to time be changed by agreement between the Company and the Depositary. For further details see https://www.adr.com

The Depositary may make available to the Company a set amount or a portion of the Depositary fees charged in respect of the ADR program or otherwise upon such terms and conditions as the Company and the Depositary may agree from time to time.

The right of the Depositary to receive payment of fees, charges and expenses as provided above shall survive the termination of the Deposit Agreement. As to any Depositary, upon the resignation or removal of such Depositary, such right shall extend for those fees, charges and expenses incurred prior to the effectiveness of such resignation or removal.

**Taxes**

If any tax or other governmental charges (including any penalties and/or interest) shall become payable by or on behalf of the Custodian or the Depositary with respect to the ADR, any Deposited Securities represented by the ADSs evidenced hereby or any distribution thereon, such tax or other governmental charge shall be paid by the

Holder to the Depositary and by holding or having held an ADR the Holder and all prior Holders, jointly and severally, agree to indemnify, defend and save harmless each of the Depositary and its agents in respect thereof. The Depositary may refuse to effect any registration, registration of transfer, split-up or combination hereof or, subject to the terms and conditions of the Deposit Agreement, any withdrawal of such Deposited Securities until such payment is made. The Depositary may also deduct from any distributions on or in respect of Deposited Securities, or may sell by public or private sale for the account of the Holder hereof any part or all of such Deposited Securities (after attempting by reasonable means to notify the Holder hereof prior to such sale), and may apply such deduction or the proceeds of any such sale in payment of such tax or other governmental charge, the Holder remaining liable for any deficiency, and shall reduce the number of ADSs evidenced hereby to reflect any such sales of Shares. In connection with any distribution to Holders, the Company or its agents will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Company or its agents; and the Depositary and the Custodian will remit to the appropriate governmental authority or agency all amounts (if any) required to be withheld and owing to such authority or agency by the Depositary or the Custodian. The Depositary will forward to the Company such information from its records as the Company may reasonably request to enable the Company to file any necessary reports with governmental authorities or agencies. If the Depositary determines that any distribution in property other than cash (including Shares or rights) on Deposited Securities is subject to any tax that the Depositary or the Custodian is obligated to withhold, the Depositary may dispose of all or a portion of such property in such amounts and in such manner as the Depositary deems necessary and practicable to pay such taxes, by public or private sale, and the Depositary shall distribute the net proceeds of any such sale or the balance of any such property after deduction of such taxes to the Holders entitled thereto. Each Holder of an ADR or an interest therein agrees to indemnify the Depositary, the Company, the Custodian and any of their respective officers, directors, employees, agents and affiliates against, and hold each of them harmless from, any claims by any governmental authority with respect to taxes, additions to tax, penalties or interest arising out of any refund of taxes, reduced rate of withholding at source or other tax benefit obtained.

See 10.6 Taxation for additional information on tax issues relating to ADRs.

**Exoneration**

The Depositary, the Company, their agents and each of them shall: (a) incur no liability to Holders or beneficial owners of ADSs (i) if any present or future law, rule, regulation, fiat, order or decree of the United States, the Republic of Italy or any other country or jurisdiction, or of any governmental or regulatory authority or any securities exchange or market or automated quotation system, the provisions of or governing any Deposited Securities, any present or future provision of the Company s charter, any act of God, war, terrorism, nationalization, expropriation, currency restrictions, work stoppage, strike, civil unrest, revolutions, rebellions, explosions, computer failure or circumstance beyond its direct and immediate control shall prevent or delay, or shall cause any of them to be subject to any civil or criminal penalty in connection with, any act which the Deposit Agreement or the ADR provides shall be done or performed by it or them (including, without limitation, voting pursuant to the terms and conditions of the Deposit Agreement), or (ii) by reason of any exercise or failure to exercise any discretion given it in the Deposit Agreement or the ADR (including, without limitation, any failure to determine that any distribution or action may be lawful or reasonably practicable); (b) assume no liability to Holders or beneficial owners of ADSs except to perform its obligations to the extent they are specifically set forth in the ADR and the Deposit Agreement without gross negligence or willful misconduct; (c) in the case of the Depositary and its agents, be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADR; (d) in the case of the Company and its agents hereunder be under no obligation to appear in, prosecute or defend any action, suit or other proceeding in respect of any Deposited Securities or the ADR, which in its opinion may involve it in expense or liability, unless indemnity satisfactory to it against all expense (including fees and disbursements of counsel) and liability be furnished as often as may be required; or (e) not be liable to Holders or beneficial owners of ADSs for any action or inaction by it in reliance upon the advice of or information from legal counsel, accountants, any person presenting Shares for deposit, any Holder, or any other person believed by it to be competent to give such advice or information. The Depositary shall not be liable for the acts or omissions made by, or the insolvency of, any securities depository, clearing agency or settlement system. The Depositary shall not be responsible for, and shall incur no liability in connection with or arising from, the insolvency of any Custodian that is not a branch or affiliate of JPMorgan Chase Bank, N.A. The Depositary shall not have any liability for the price received in connection with any sale of securities, the timing thereof or any delay in action or omission to act nor shall it be responsible for any error or delay in action, omission to act, default or negligence on the part of the party so retained in connection with any such sale or proposed sale. Notwithstanding anything to the contrary contained in the Deposit Agreement (including the ADRs), subject to the penultimate sentence of this paragraph, the Depositary shall not be responsible for, and shall incur no liability in connection with or arising from, any act or omission to act on the part of the Custodian except to the extent that the Custodian has (i) committed fraud or willful misconduct in the provision of custodial services to the Depositary or (ii) failed to use reasonable care in the provision of custodial services to the Depositary as determined in accordance with the standards prevailing in the jurisdiction in which the Custodian is located. The Depositary, its agents and the Company may rely and shall be protected in acting upon any written notice, request, direction, instruction or document believed by them to be genuine and to have been signed, presented or given by the proper party or parties. The Depositary shall be under no obligation to inform Holders or any other holders of an interest in any ADSs about the requirements of Italian law, rules or regulations or any changes therein or thereto. The Depositary and its agents will not be responsible for any failure to carry out any instructions to vote any of the Deposited Securities, for the manner in which any such vote is cast or for the effect of any such vote. The Depositary may rely upon instructions from the Company or its counsel in respect of any approval or license required for any currency conversion, transfer or distribution. The Depositary and its agents may own and deal in any class of securities of the Company and its affiliates and in ADRs. Notwithstanding anything to the contrary set forth in the Deposit Agreement or an ADR, the Depositary and its agents may fully respond to any and all demands or requests for information maintained by or on its behalf in connection with the Deposit Agreement, any Holder or Holders, any ADR or ADRs or otherwise related hereto or thereto to the extent such information is requested or required by or pursuant to any lawful authority, including without limitation laws, rules, regulations, administrative or judicial process, banking, securities or other regulators. None of the Depositary, the Custodian or the Company shall be liable for the failure by any Holder or beneficial owner to obtain the benefits of credits or refunds of non-U.S. tax paid against such Holder s or beneficial owner s income tax liability. The Depositary and the Company shall not incur any liability for any tax or tax consequences that may be incurred by Holders or beneficial owners on account of their ownership or disposition of the ADRs or ADSs. The Depositary shall not incur any liability for the content of any information submitted to it by or on behalf of the Company for distribution to the Holders or for any inaccuracy of any translation thereof, for any investment risk associated with acquiring an interest in the Deposited Securities, for the validity or worth of the Deposited Securities, for the credit-worthiness of any third party, for allowing any rights to lapse upon the terms of the Deposit Agreement or for the failure or timeliness of any notice from the Company. The Depositary shall not be liable for any acts or omissions made by a successor depositary. By holding an ADS or an interest therein, Holders and owners of ADSs each irrevocably agree that any legal suit, action or proceeding against or involving the Company or the Depositary, arising out of or based upon the Deposit Agreement, the ADSs or the transactions contemplated herein, therein or hereby, may only be instituted in a state or federal court in New York, New York, and by holding an ADS or an interest therein each irrevocably waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the exclusive jurisdiction of such courts in any such suit, action or proceeding. The Company has agreed to indemnify the Depositary and its agents under certain circumstances and the Depositary has agreed to indemnify the Company under certain circumstances. Neither the Company, the Depositary nor any of their respective agents shall be liable to Holders or beneficial owners of interests in ADSs for any indirect, special, punitive or consequential damages (including, without limitation, legal fees and expenses) or lost profits, in each case of any form incurred by any person or entity, whether or not foreseeable and regardless of the type of action in which such a claim may be brought. No disclaimer of liability under the Securities Act of 1933 is intended by any provision hereof.

**Governing Law**

The Deposit Agreement is governed by and shall be construed in accordance with the laws of the State of New York.

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## 10.6 TAXATION

Unless otherwise indicated herein, for purposes of the following discussion regarding taxation, the Ordinary Shares and the Savings Shares are collectively referred to as the TIM Shares .

### 10.6.1 ITALIAN TAXATION

The following is a summary of material Italian tax consequences of the ownership and disposition of Ordinary Shares, Savings Shares or ADSs as at the date hereof. It does not purport to be a complete analysis of all potential tax matters relevant to a decision to hold Ordinary Shares, Savings Shares or ADSs. Therefore, this summary is provided for general information only and it is based upon Italian tax laws in effect as of the date of this document. Consequently, be aware that such laws may change anytime in the course of the year. You should consult your own tax advisors as to matters of Italian tax law. For purposes of Italian law and the Italian - US Income Tax Convention which went into effect on January 1, 2010 (the **Treaty** ), holders of ADSs which are evidenced by ADRs will be treated as holders of the underlying Ordinary Shares or Savings Shares, as the case may be.

***Taxation of non-resident taxpayers. Introduction***

As a general principle, non-resident taxpayers are liable for Italian income tax with respect to income that is treated as arising in Italy, unless such income is subject to a final withholding tax deducted by the payer of the income. Specifically, by means of a new measure that applies to dividends received starting on January 1, 2018 and to capital gains realized starting on January 1, 2019, dividends and capital gains derived from the holding and disposal of both substantial and non-substantial participations (as defined below) by individual Italian tax resident, not holding such participations in a business capacity but as an investment, are taxed through a final withholding tax or substitute tax of 26 percent (previously, such treatment only applied with respect to the holding and disposal of non-substantial participations). However, the previous regime (only affecting resident shareholders) applies to dividends paid out of profits realized until the fiscal year ongoing on December 31, 2017 (i.e., 2017 for taxpayers whose fiscal year coincides with the calendar year) and declared between January 1, 2018 and December 31, 2022.

***Dividends taxation***

Dividends paid either to holders of Ordinary Shares and applicable ADSs or to holders of Savings Shares and applicable ADSs, who are not Italian tax residents and do not have a permanent establishment in Italy to which dividends are connected are subject to a final withholding tax at a rate of 26 percent (the rate was increased from 20 to 26 percent by Law Decree No. 66 of April 24, 2014, converted with amendments into Law No. 89 of June 23, 2014 and applies on dividends paid from July 1, 2014 onwards, even in case the relevant distribution resolution was adopted before the above mentioned date). The obligation to withhold such tax is imposed on the resident company or the authorized intermediary paying the dividends, as applicable.

All shares of Italian listed companies have to be registered in a centralized deposit system managed by Monte Titoli. With respect to dividends paid in connection with shares held in the centralized deposit system, such as TIM Shares, instead of the withholding tax mentioned above, a substitute income tax will apply at the same tax rate as the above-mentioned withholding tax. This substitute income tax is levied by, and under the responsibility of, the Italian authorized intermediaries participating in the Monte Titoli system and with whom the securities are deposited and also by non-Italian authorized intermediaries participating, directly or through a non-Italian centralized deposit system, in the Monte Titoli system. With respect to any dividends paid within the above mentioned centralized deposit system, TIM assumes no responsibility for the withholding of tax at the source (and application of tax treaties, as discussed below) as such responsibility lies entirely on the Italian authorized intermediaries with whom the securities are deposited.

Non-resident holders of Ordinary Shares and applicable ADSs have the right to recover within 48 months from the date of payment of the Italian substitute income tax, up to eleven- twenty-sixth (11/26) of such 26 percent substitute tax on their dividend income, upon providing adequate evidence (by documentation issued by the tax authorities of their country of residence) that they have paid a corresponding final income tax in such home country on the same dividend income.

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These refunds are normally subject to extensive delays. In addition, these refunds are an alternative to seeking any relief from double taxation under an income tax treaty, including the Treaty.

U.S. resident beneficial owners of Shares (either Ordinary or Savings Shares) and related ADSs may be entitled to a reduced tax rate on their dividends under the Treaty. Where: (i) a U.S. resident owner qualifies for the benefits of the Treaty and meets all the requirements of the Treaty provision dealing with limitation on benefits, (ii) the U.S. resident owner is the actual beneficial owner of the dividend income, (iii) the dividends paid are not connected with a permanent establishment in Italy through which the U.S. resident owner carries on a business or with a fixed base in Italy through which the U.S. resident owner performs independent personal services, the Treaty generally provides that Italian taxes cannot exceed 15 percent of the gross amount of the dividend (this 15 percent rate may be reduced to 5 percent when the beneficial owner of the dividends is a U.S. company which has owned at least 25 percent of the voting stock of the company paying the dividends for a 12-month period ending on the date the dividend is declared).

The withholding agent (i.e., the authorized intermediary/Depositary) may apply the Treaty rate directly if the recipient, as the beneficial owner of TIM Shares or ADSs, provides, before the dividend is paid (in accordance with the relevant instructions about timing and modalities generally provided for by the Depositary), the intermediary with which the shares are deposited and which participates in the Monte Titoli system with the following documentation:

- a residency certificate that must be validated by the tax authorities in the holder s country of residence. In the case of a U.S. holder, a certification (Form 6166) issued by the U.S. Internal Revenue Service that states that the beneficial owner is a U.S. resident for tax purposes. The certification is valid until March 31 of the year following the submission; and

- a declaration by the recipient containing all the data identifying such person as the beneficial owner and establishing the existence of all the conditions necessary for the application of the Treaty, including a statement that it does not have a permanent establishment in Italy to which the dividend payment is attributable.

The processing of requests for certification by the U.S. Internal Revenue Service may take a substantial period of time. Accordingly, in order to be eligible for the procedure described below, eligible ADS holders should begin the process of obtaining Form 6166 as soon as possible after receiving instructions from the Depositary on how to claim the reduced rate provided by the Treaty.

The Depositary s instructions, which will be sent to all ADS holders before the dividend payment date, will specify certain deadlines for delivering to the Depositary any documentation required to obtain the reduced rate provided by the Treaty, including the certification that the eligible ADS holders must obtain from the U.S. Internal Revenue Service. In the case of ADSs held through a broker or other financial intermediary, the required documentation should be delivered to such financial intermediary for transmission to the Depositary. In all other cases, the eligible ADS holders should deliver the required documentation directly to the Depositary.

If the holder of TIM Shares or ADSs does not provide the relevant documentation in order to obtain the reduced rate provided by the Treaty at the time the dividend is paid, the holder must pay the substitute income tax at the rate set forth by Italian domestic law. In this case, the recipient can apply for a refund equal to the difference between the Italian domestic rate and the Treaty rate directly from the Italian tax authorities by filing the relevant documentation within 48 months from the date of payment. Extensive delays have been encountered by U.S. residents seeking payments directly from the Italian authorities.

In the case of dividends paid to a U.S. partnership, the reduction of the tax rate under the Treaty is only available to the extent such dividends are subject to U.S. tax in the hands of the partners.

***Capital Gains Tax***

Capital gains tax ( **CGT** ) is levied on capital gains realized by non-residents from the disposal of shares in companies resident in Italy for tax purposes even if those shares are held outside of Italy. However, capital gains realized by non-resident holders on the sale of non-substantial participations (as defined below) in companies whose shares or ADSs are listed on a stock exchange and resident in Italy for tax purposes (as is the case for TIM) are not subject to CGT.

A substantial participation consists of securities (except for Savings Shares and applicable ADSs) that: (i) entitle the holder to exercise more than 2 percent of the voting rights of a company with shares listed on a stock exchange (TIM is such a company) in the ordinary meeting of the shareholders; or (ii) represent more than 5 percent of the share capital of a company with shares listed on a stock exchange (TIM is such a company). A non-substantial participation is any shareholding that does not meet the above-mentioned requirements to be qualified as a substantial participation .

The relevant percentage is calculated taking into account the shareholdings sold during the prior 12-month period (the period starting from the day on which the taxpayer holds shareholding higher than the above mentioned percentages of 2 or 5 percent).

Pursuant to the Treaty, a U.S. resident will not be subject to Italian CGT on a sale of substantial participations unless the TIM Shares or ADSs form part of the business property of a permanent establishment of the holder in Italy or pertain to a fixed base available to a holder in Italy for the purpose of performing independent personal services. U.S. residents who sell TIM Shares or ADSs may be required to produce appropriate documentation establishing that the above-mentioned conditions of non-taxability pursuant to the Treaty provisions have been satisfied if CGT would otherwise be applicable.

***Inheritance and Gift Tax***

The transfers of any valuable asset (including Ordinary Shares, Savings Shares and ADSs) as a result of death or donation (or other transfers for no consideration) and the creation of liens on such assets for a specific purpose are taxed as follows:

(i) transfers in favor of the spouse and of direct descendants or ascendants are subject to an inheritance and gift tax applied at a rate of 4 percent on the value of the inheritance or the gift exceeding 1,000,000 euros (per beneficiary);

(ii) transfers in favor of brothers and sisters are subject to an inheritance and gift tax applied at a rate of 6 percent on the value of the inheritance or the gift exceeding 100,000 euros (per beneficiary);

(iii) transfers in favor of all other relatives up to the fourth degree or relatives-in-law up to the third degree, are subject to an inheritance and gift tax applied at a rate of 6 percent on the entire value of the inheritance or the gift;

(iv) any other transfer is subject to an inheritance and gift tax applied at a rate of 8 percent on the entire value of the inheritance or the gift.

If the beneficiary of any such transfer is a disabled individual, whose handicap is recognized pursuant to Law No. 104 of February 5, 1992, the tax is applied only on the value of the assets (including the Shares) received in excess of 1,500,000 euros at the rates illustrated above, depending on the type of relationship existing between the deceased or donor and the beneficiary.

With respect to listed shares, the value for inheritance and gift tax purposes is the average stock exchange price of the last quarter preceding the date of the succession or of the gift (increased by the interest accrued during the meanwhile). With respect to unlisted shares, the value is determined proportionally to the equity resulting from the last approved balance sheet of the company.

For non-residents, Italian Inheritance and Gift tax applied only with respect to assets and rights existing in the Italian territory. Shares in companies that have their registered office, the seat of the administration or the main object in Italy are considered as existing in the Italian territory.

No gift tax convention is currently in place between Italy and the United States.

***Registration Tax***

Transfer of shares, bonds and similar securities based on contracts executed in Italy are subject to registration tax as follows: (i) public deeds and notarized deeds are subject to a lump-sum registration tax of 200 euros at the time of the execution; (ii) private deeds are subject to registration tax, at the same lump-sum, only in case of use or voluntary registration. This tax is also payable where a contract executed abroad or with different formalities is presented to an Italian registration office or an Italian court.

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*Stamp taxes and duties*

Stamp duties ( imposta di bollo ) are levied on certain documents, contracts and registers (e.g., bank checks, statements of accounts, bills, written contracts, judicial acts, accountancy books), as regulated by DPR 642/1972. The tax is usually a nominal lump sum and, in exceptional cases, it may be levied as a percentage of the value mentioned in the document.

Any report to clients by an Italian resident intermediary with reference to financial instruments and products (including those held abroad through an Italian resident intermediary) is subject to an annual stamp duty of 0.2 percent (0.15 percent in 2013). The rate is applied on the market value or where no market value is available on the nominal value or the redemption amount of any financial product or financial instruments (including the TIM shares or ADSs). The provision setting a minimum threshold of 34.20 euros was abolished on December 31, 2013. For taxpayers other than individuals, this stamp duty is capped at 14,000 euros (in 2013, the cap was 4,500 euros).

It is assumed that intermediaries send periodic communications to clients at least once a year, even if the Italian intermediary is not required to prepare and send such communications. In this case, stamp duties must be applied at December 31 of each year and, in any case, at the expiration of the relationship between intermediary and client.

*Tax on financial transactions*

1. **Shares and other equity instrument transactions**

The Italian Financial Transactions TAX ( **FTT** ) was introduced by Law No. 228 as of December 24, 2012. Detailed regulations of such tax were provided by the Decree of the Ministry of Economy and Finance as of February 21, 2013. In accordance with the relevant provisions, starting from March 1, 2013 the FTT is levied to:

a) transfers of ownership of shares and certain participating financial instruments which have been issued by companies that have their registered office in Italy, regardless of the place of residence of the parties involved and of the place where the contract has been executed; and

b) transfers of ownership of securities (such as ADSs) representing equity investments referred to in point a) above, irrespective of the country of residence of the issuer of these securities.

Therefore, the relevant tax criterion for applying FTT is the place of residence (i.e., the place of the registered office) of the issuer of the shares and of the participating financial instruments. In contrast, the place of the execution of the relevant transfers and the residence of the contractual parties involved is not relevant in defining taxed transactions. Accordingly, transfers performed outside Italian territory through foreign intermediaries, are also subject to tax in Italy, to the extent they refer to shares, or participating financial instruments issued by companies registered in Italy (or securities representing such equity investments). So, with reference to the transfer of ADSs, the place of residence of the Depositary is not relevant. Instead the country of residence of TIM, as issuer of the shares, is relevant.

The taxable base is the net daily balance of the transactions calculated on the same security and executed by the same persons, or the consideration paid.

The tax is determined proportionally by applying a percentage rate to the value of the counter value of the transaction that varies in relation to the market on which the transaction is carried out. The standard FTT rate is:

- 0.20 percent (exceptionally increased to 0.22 percent only for 2013) for over-the-counter transactions; and

- 0.10 percent (exceptionally increased to 0.12 percent only for 2013) for transactions executed on regulated markets or in multilateral trading facilities established in (i) an EU Member State, (ii) in an EEA country that is included in the white list, or (iii) subject to certain conditions, in a non-EEA jurisdiction that is included in the white list.

The FTT is due by the person to whom the ownership of the shares, the financial participating instruments and the securities representing equity investments (such as ADSs) is transferred. The tax is either (i) levied by the financial intermediary (e.g., banks, trusts, investment companies) or the notary directly involved in the execution of the transfer, if any, or (ii) paid directly by the transferee, by the 16th day of the month following the execution of the respective transaction. Where more than one intermediary are involved in the execution of the transfer, the tax must be levied by the intermediary who receives the order to execute the transaction directly from the transferee.

Non-Italian intermediaries and other non-resident persons involved in the transaction must comply with the obligations deriving from the application of such tax through their Italian permanent establishment, if any; in absence of a permanent establishment in Italy, non-residents may appoint a tax representative in order to comply with all the relevant tax obligations. In cases other than the above (i.e., where an intermediary is not interposed in a taxable transaction), the obligations, including the payment of the tax, must be fulfilled directly by the non-resident transferee.

Non-residents involved in a financial transaction are deemed to be the purchasers or the final counterparty of the execution order, if established in a State which does not fulfill the exchange of information requirements. In order to identify the uncooperative countries for FTT purposes, reference shall be made to ITA Protocol No. 84383 of May 30, 2016 (as subsequently modified and integrated) that conversely provides a list of States that fulfill the exchange information requirements.

On December 15, 2017, ITA issued Protocol No. 294475, approving the new FTT return form and related instructions, to be used from January 1, 2018. The FTT return must be electronically filed by March 31 of each year (with respect to FTT paid over the previous year), but no return needs to be filed if the FTT paid does not exceed 50 euros. Non-residents may file the FTT return through their Italian permanent establishment or through an appointed tax representative. Non-residents without a permanent establishment in Italy and who have not appointed a tax representative in Italy but directly identified in Italy (i.e., non-resident who applied for the assignment of an Italian Tax Identification Number) as an alternative to the electronic submission, can file the FTT declaration by shipment carried out from abroad, using registered letter or other equivalent means, provided that the shipping date can be determined with certainty from them.[11] The return form and related instructions are available on the ITA website ( www.agenziaentrate.gov.it or www.finanze.gov.it ).

### 10.6.2 United States Federal Income Taxation

The following is a description of material U.S. federal income tax consequences to the U.S. Holders described below of owning and disposing of TIM Shares or ADSs representing TIM Shares, but it does not purport to be a comprehensive description of all tax considerations that may be relevant to a particular person s decision to hold the securities. This discussion applies only to a U.S. Holder that holds TIM Shares or ADSs as capital assets for U.S. federal income tax purposes. In addition, it does not describe all of the tax consequences that may be relevant in light of the U.S. Holder s particular circumstances, including alternative minimum tax consequences and the potential application of the provisions of the Internal Revenue Code of 1986, as amended (the **Code** ) known as the Medicare contribution tax, and tax consequences applicable to U.S. Holders subject to special treatment, such as:

- certain financial institutions;

- dealers or traders in securities who use a mark-to-market method of tax accounting;
- persons holding TIM Shares or ADSs as part of a hedging transaction, straddle, wash sale, conversion transaction or integrated transaction or persons entering into a constructive sale with respect to the TIM Shares or ADSs;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- entities classified as partnerships for U.S. federal income tax purposes;
- tax-exempt entities, individual retirement accounts or Roth IRAs ;
- persons that own or are deemed to own ten percent or more of TIM stock by vote or value;

[11] If sent from abroad, the return must be placed in a fitting envelope of a size suitable to contain it without folding it. The envelope must be addressed to the Revenue Agency, Venice Operations Center, via Giorgio De Marchi n. 16, 30175 Marghera (VE) Italy. The declarant s Italian tax identification number must be indicated on the envelope along with the following words Contiene dichiarazione Modello FTT ( It contains FTT Form declaration ).

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- persons who acquired TIM Shares or ADSs pursuant to the exercise of an employee stock option or otherwise as compensation; or

- persons holding TIM Shares in connection with a trade or business conducted outside of the United States.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds TIM Shares or ADSs, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. Partnerships holding TIM Shares or ADSs and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of holding and disposing of the TIM Shares or ADSs.

This discussion is based on the Code, administrative pronouncements, judicial decisions, final, temporary and proposed Treasury regulations, and the Treaty, all as of the date hereof, any of which is subject to change, possibly with retroactive effect. It is also based in part on representations by the Depositary and assumes that each obligation under the Deposit Agreement and any related agreement will be performed in accordance with its terms.

A U.S. Holder is a person who, for U.S. federal income tax purposes, is a beneficial owner of TIM Shares or ADSs who is eligible for the benefits of the Treaty and is:

- a citizen or individual resident of the United States;

- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state therein or the District of Columbia; or

- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

In general, a U.S. Holder who owns ADSs will be treated as the owner of the underlying Ordinary Shares or Saving Shares, as the case may be, represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss will be recognized if a U.S. Holder exchanges ADSs for the underlying Ordinary Shares or Saving Shares, as the case may be, represented by those ADSs.

The U.S. Treasury has expressed concern that parties to whom American depositary shares are released before shares are delivered to the depositary ( pre-release ), or intermediaries in the chain of ownership between holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming of foreign tax credits by holders of American depositary shares. These actions would also be inconsistent with the claiming of the reduced rate of tax, described below, applicable to dividends received by certain non-corporate holders. Accordingly, the creditability of Italian taxes, and the availability of the reduced tax rate for dividends received by certain non-corporate U.S. Holders, each described below, could be affected by actions taken by such parties or intermediaries.

U.S. Holders should consult their tax advisers concerning the U.S. federal, state, local and foreign tax consequences of owning and disposing of TIM Shares or ADSs in their particular circumstances.

This discussion assumes that TIM has not been, and will not become, a passive foreign investment company, as described below.

***Taxation of distributions***

Distributions made with respect to the TIM Shares or ADSs (other than certain pro rata distributions of TIM Shares or ADSs), including any Italian tax withheld, will generally constitute foreign-source dividend income for U.S. federal income tax purposes to the extent such distributions are made from TIM s current or accumulated earnings and profits, as determined in accordance with U.S. federal income tax principles. Because TIM does not maintain calculations of earnings and profits under U.S. federal income tax principles, it is expected that distributions will generally be reported to U.S. Holders as dividends. If you are a non-corporate U.S. Holder, subject to applicable limitations that vary depending on your particular circumstances and the discussion above regarding concerns expressed by the U.S. Treasury, dividends paid to you may be taxable at the favorable rates applicable to long-term capital gains. Non-corporate U.S. Holders should consult their own tax advisers regarding the availability of the reduced tax rate on dividends. If you are a corporate U.S. Holder you will not be entitled to claim a dividends-received deduction for dividends paid on the TIM Shares or ADSs. The amount of any cash distribution paid in euros, including the amount of any Italian tax withheld, will be included in your income in an amount equal to the U.S. dollar value of such euros on the date of receipt by the Depositary, in the case of U.S. Holders of ADSs, or by the U.S. Holder, in the case of U.S. Holders of TIM Shares, regardless of whether the payment is in fact converted into U.S. dollars. If the dividend is converted into U.S. dollars on the date of receipt, you generally should not be required to recognize foreign currency gain or loss in respect of the dividend income. You may have foreign currency gain or loss if the amount of such dividend is converted into U.S. dollars after the date of its receipt. Gain or loss, if any, recognized on the sale or other disposition of such euros will be U.S.-source ordinary income or loss. The amount of any distribution of property other than cash will be the fair market value of such property on the date of distribution.

Subject to certain limitations and restrictions and the discussion above regarding concerns expressed by the U.S. Treasury, Italian taxes withheld from distributions on TIM Shares or ADSs at a rate not in excess of that applicable under the Treaty will be eligible for credit against a U.S. Holder s U.S. federal income tax liability. Italian taxes to the extent such taxes are in excess of the applicable Treaty rate or are refundable under domestic Italian law will generally not be eligible for credit against a U.S. Holder s U.S. federal income tax liability (See Section 10.6.1 Italian Taxation Dividends taxation for a discussion of how to obtain the Treaty withholding rate or refunds). Instead of claiming a credit, you may, at your election, deduct such Italian taxes in computing your taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all taxes paid or accrued in the taxable year to foreign countries and possessions of the United States. You should consult your tax adviser concerning the foreign tax credit implications of the payment of any Italian withholding taxes.

***Taxation of capital gains***

A U.S. Holder will generally recognize U.S.-source capital gain or loss on the sale or other disposition of TIM Shares or ADSs, which will be long-term capital gain or loss if the U.S. Holder held the TIM Shares or ADSs for more than one year. The amount of gain or loss will be equal to the difference between the gross amount realized and the U.S. Holder s adjusted tax basis in the TIM Shares or ADSs, in each case as determined in U.S. dollars. Any Italian capital gains tax imposed on dispositions of TIM Shares or ADSs generally will not be creditable against a U.S. Holder s federal income tax liability. U.S. Holders should consult their own tax advisers about the treatment of capital gains, which may be taxed at lower rates than ordinary income for non-corporate taxpayers, and capital losses, the deductibility of which may be limited.

***Passive Foreign Investment Company Rules***

TIM believes that it was not a passive foreign investment company ( **PFIC** ) for U.S. federal income tax purposes for 2018. However, since PFIC status depends upon the composition of TIM s income and assets and the market value of TIM s assets (including, among others, less than 25 percent owned equity investments) from time to time, there can be no assurance that TIM will not be a PFIC for any taxable year. If TIM were a PFIC for any taxable year during which a U.S. Holder held TIM Shares or ADSs, certain adverse tax consequences could apply to the U.S. Holder.

***Information Reporting and Backup Withholding***

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (i) the U.S. Holder is an exempt recipient or (ii) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder s U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the Internal Revenue Service.

Subject to certain exceptions, U.S. Holders who are individuals or certain specified entities may be required to report information relating to securities of non-U.S. companies, or non-U.S. accounts through which they are held. U.S. Holders should consult their tax advisers regarding the effect, if any, of these rules on their ownership or disposition of TIM Shares or ADSs.

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**Item 10. Additional Information** **Document On Display**

## 10.7 DOCUMENTS ON DISPLAY

We file Annual Reports on Form 20-F and furnish periodic reports on Form 6-K to the SEC. Our SEC filings are available at the website maintained by the SEC at www.sec.gov.

Our ADSs are listed on the New York Stock Exchange under the symbol TI . You may inspect any periodic reports and other information filed with or furnished to the SEC by us at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

As a foreign private issuer, we are exempt from the rules under the Exchange Act which prescribe the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

We are subject to the informational requirements of the Italian securities commission and the Italian stock exchange, and we file reports and other information relating to our business, financial condition and other matters with the Italian securities commission, the Italian stock exchange and with the regulated storage system 1Info. You may read such reports, statements and other information, including the annual, semi-annual and quarterly financial statements, at the website www.1Info.it. Some of our Italian securities commission filings are also available at the website maintained by the Italian securities commission at www.consob.it.

As described elsewhere in this Annual Report, certain reports, statements and presentations related to TIM can be found on our website at www.telecomitalia.com.

We have appointed JPMorgan Chase Bank, N.A. to act as depositary for our ADSs. JPMorgan Chase Bank will, as provided in the deposit agreement, arrange for the mailing of summaries in English of such reports and communications to all record holders of our ADSs. Any record holder of our ADSs may read such reports and communications or summaries thereof at JPMorgan Chase Bank s office located at 4 New York Plaza, New York, New York 10004.

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**Item 11. Quantitative And Qualitative Disclosures About Market Risks**

## Item 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

With regard to the quantitative and qualitative disclosures about market risks, please see the Note Financial Risk Management of the Notes to the Consolidated Financial Statements included elsewhere herein, which provides:

- the objectives and the policies for the management of the financial risks of TIM Group, and
- the sensitivity analyses of the market risks we are exposed to.

The above mentioned Note should be read in conjunction with the Note Accounting Policies , Note Derivatives and Note Supplementary Disclosures on Financial Instruments of the Notes to the Consolidated Financial Statements included elsewhere in this Annual Report, which provide other information relating to financial instruments.

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## Item 12. Description Of Securities Other Than Equity Securities

## Item 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

### Item 12A. DEBT SECURITIES

Not applicable.

### Item 12B. WARRANTS AND RIGHTS

Not applicable.

### Item 12C. OTHER SECURITIES

Not applicable.

### Item 12D. AMERICAN DEPOSITARY SHARES

***Description of fees and charges paid by ADR Holders***

As provided for in the American Depositary Receipt included as Exhibit A to the Deposit Agreement between JP Morgan Chase Bank, as depositary (the **Depositary** ), TIM S.p.A. and Holders of American Depositary Receipts dated as of November 16, 2017, holders of American Depositary Shares may be charged, directly or indirectly, the following amounts in relation to the ownership of depositary receipts held in the Company s ADR Program, which amounts are payable to the Depositary.

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**Item 12. Description Of Securities Other Than Equity Securities**

| Category of Service | Depositary Actions | Associated Fee |
|---|---|---|
| a) Deposit of underlying shares or surrender of ADRs | Each person to whom ADSs are issued, including without limitation, issuances against deposits of Shares, issuances in respect of Share Distributions, Rights and Other Distributions (1) or issuances pursuant to a stock dividend or stock split declared by the Company, or issuances pursuant to a merger, exchange of securities or any other transaction or event affecting the ADSs or the Deposited Securities.<br><br>Each person surrendering ADSs for withdrawal of Deposited Securities or whose ADSs are cancelled or reduced for any other reason. | U.S.$5.00 for each 100 ADSs (or portion thereof) issued, delivered, reduced, cancelled or surrendered (as the case may be). |
| b) Deposit, withdrawal or surrender of ADSs by any Party or issue of ADSs to such Party | The following additional charges shall be incurred by the Holders by any party depositing or withdrawing Shares or by any party surrendering ADSs and/or to whom ADSs are issued (including, without limitation, issuances pursuant to a stock dividend or stock split declared by the Company or an exchange of stock regarding the ADSs or the Deposited Securities or a distribution of ADSs pursuant to paragraph (10) of the Deposit Agreement), whichever is applicable. | (i) a fee of U.S.$0.05 or less per ADS for any Cash distribution made pursuant to the Deposit Agreement.<br><br>(ii) a fee of U.S.$1.50 per ADR or ADRs for transfers made pursuant to paragraph (3) of the Deposit Agreement.<br><br>(iii) a fee for the distribution or sale of securities pursuant to paragraph (10) of the Deposit Agreement, such fee being in an amount equal to the fee for the execution and delivery of ADSs referred to above which would have been charged as a result of the deposit of such securities (for |

| | | |
|---|---|---|
| | | purposes of this paragraph treating all such securities as if they were Shares) but which securities or the net cash proceeds from the sale thereof are instead distributed by the Depositary to Holders entitled thereto. |
| c) Services performed by the Depositary in administering the ADRs | Services performed by the Depositary in administering the ADRs (which fee may be charged on a periodic basis during each calendar year and shall be assessed against Holders as of the record date or record dates set by the Depositary during each calendar year and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions). | An aggregate fee of U.S.$0.05 per ADS per calendar year (or portion thereof). |
| d) Fees incurred by the Depositary | A fee for the reimbursement of such fees, charges and expenses as are incurred by the Depositary and/or any of its agents (including, without limitation, the | Reimbursement of fees charges and expenses as incurred by the Depositary and/or any of its agents. |

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**Item 12. Description Of Securities Other Than Equity Securities**

| Category of Service | Depositary Actions | Associated Fee |
|---|---|---|
| | Custodian and expenses incurred on behalf of Holders in connection with compliance with foreign exchange control regulations or any law or regulation relating to foreign investment) in connection with the servicing of the Shares or other Deposited Securities, the sale of securities (including, without limitation, Deposited Securities), the delivery of Deposited Securities or otherwise in connection with the Depositary s or its Custodian s compliance with applicable law, rule or regulation (which fees and charges shall be assessed on a proportionate basis against Holders as of the record date or dates set by the Depositary and shall be payable at the sole discretion of the Depositary by billing such Holders or by deducting such charge from one or more cash dividends or other cash distributions). | |
| e) Expenses by the Depositary | Expenses incurred on behalf of Holders in connection with: | |
| | (i) stock transfer or other taxes and other governmental charges | As necessary |
| | (ii) SWIFT, cable, telex and facsimile transmission and delivery charges incurred at the request of persons depositing, or Holders delivering Shares, ADRs or Deposited Securities | US $20.00 per transaction |
| | (iii) in connection with the conversion of foreign currency into U.S. dollars, the Depositary shall deduct out of such foreign currency the fees, expenses and other charges charged by it and/or its agent (which may be a division, branch or affiliate) so appointed in connection with such conversion. The | As necessary |

Depositary and/or its agent may act as principal for such conversion of foreign currency. Such charges may at any time and from time to time be changed by agreement between the Company and the Depositary.

(1) The Depositary may sell (by public or private sale) sufficient securities and property received in respect of such share distributions, rights and other distributions prior to such deposit to pay such charge.

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## Item 12. Description Of Securities Other Than Equity Securities

***Direct and indirect payments made by JP Morgan Chase Bank to TIM in relation to the Company s ADR program***

Pursuant to the Letter Agreement signed on November 20, 2017 (effective January 1, 2017) between TIM S.p.A. and J.P. Morgan Chase Bank N.A., as Depositary, J.P. Morgan has agreed to pay TIM an annual Contribution which will be calculated according to the mechanism set out in paragraph 1 of the Letter Agreement ( Obligations of the Depositary and the Company ).

For the contract year 2018, the Contribution paid by J.P. Morgan to TIM was equal to US$ 837,500.

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**Item 13. Defaults, Dividend Arrearages And Delinquencies**

## PART II

### Item 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

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**Item 14. Material Modification to the Rights Of Security Holders And Use Of Proceeds**

## Item 14. MATERIAL MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

Not applicable.

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## Item 15. CONTROLS AND PROCEDURES

### 15.1. DISCLOSURE CONTROLS AND PROCEDURES

The Company, under the supervision of the Chief Executive Officer and of the Head of Administration, Finance and Control, according to the Company s 404 Process guidelines (revised also to meet the reporting requirements set forth by article 154-bis of the Italian Legislative Decree 58/1998; the aforementioned Italian rule provides for a special report broadly corresponding in scope to the certifications and the management s report on internal control over financial reporting required by the Sarbanes Oxley Act) performed an evaluation of the effectiveness of the Company s disclosure controls and procedures as of December 31, 2018. The Company s management necessarily applied its judgment in assessing the costs and benefits of such controls and procedures, which by their nature can provide only reasonable assurance regarding management s control objectives. Based on this evaluation, the Company s Chief Executive Officer and the Company s Head of Administration, Finance and Control concluded that the Company s disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) are effective at the reasonable assurance level.

### 15.2. MANAGEMENT S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company s management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company s Chief Executive Officer and the Company s Head of Administration, Finance and Control and effected by the Company s Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures for the company are being made only in accordance with authorizations of management and directors of the company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use of disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company s management assessed the effectiveness of the company s internal control over financial reporting as of December 31, 2018. In making this assessment, the Company s management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ( **COSO** ) in *Internal Control-Integrated Framework-2013.*

Based on management s assessment, management has concluded that, as of December 31, 2018, the Company s internal control over financial reporting is effective based on those criteria.

PricewaterhouseCoopers S.p.A., the independent registered public accounting firm that audited the consolidated financial statements included in this annual report, has audited the effectiveness of internal control over financial reporting as of December 31, 2018. Their attestation report on internal control over financial reporting is included herein.

## 15.3. CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There has been no change in the Company s internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company s internal control over financial reporting.

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## Item 16. [RESERVED]

## Item 16A. AUDIT COMMITTEE FINANCIAL EXPERT

The Board of Auditors in office as of April 8, 2019 determined that each of its members is an audit committee financial expert as defined in Item 16A of Form 20-F. For the names of the members of the Board of Auditors, see Item 6. Directors, Senior Management and Employees 6.3 Board of Auditors .

## Item 16B. CODE OF ETHICS AND CONDUCT

On March 23, 2004, TIM adopted its Code of Ethics and Conduct which applies - among the others - to the Company s members of the corporate bodies, (included the Executive Chairman and the Chief Executive Officer), to the management (included the Chief Financial Officer), as well as to all the Group s employees in and outside Italy; the suppliers of the Company are required to accept and apply it, too. The Code of Ethics and Conduct has subsequently been amended from time to time by the Board of Directors, which acted on the basis of opinions by the Control and Risk Committee and the Board of Statutory Auditors, in order to conform it to the developments in the applicable law and market regulations, taking into account national and international best practices. The Code of Ethics and Conduct in force is available on TIM s website at www.telecomitalia.com. See also under Item 16G. Corporate Governance 16G.1 Differences in TIM s Corporate Governance and New York Stock Exchange Corporate Governance Practices and Item 10. Additional Information 10.1 Corporate Governance .

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## Item 16C. Principal Accountant Fees And Services

## Item 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

For the year ended December 31, 2018, PricewaterhouseCoopers S.p.A. served as TIM s independent auditor.

PricewaterhouseCoopers means PricewaterhouseCoopers S.p.A., the auditor of the Company, as well as all the Italian and foreign entities belonging to the PricewaterhouseCoopers network.

The following table sets forth the aggregate fees for professional services and other services rendered by PricewaterhouseCoopers in 2018 and in 2017.

| **Type of Fees(*)** | **Fiscal year ended December 31, 2018** | **2017** |
|---|---|---|
| | **(thousands of euros)** | |
| Audit Fees(1) | 6,748 | 6,936 |
| Audit-related Fees(2) | 412 | 373 |
| **Total** | **7,160** | **7,309** |

(*) In 2018 and in 2017, no further services, other than audit fees and audit-related fees, where provided by PricewaterhouseCoopers.

(1) Audit fees consist of fees billed for professional services in connection with audits of TIM s annual financial statements, reviews of interim financial statements as well as comfort letters issued in relation to capital market transactions, agreed upon procedures for certain financial statement areas, included those required for some transactions by regulations in Italy and abroad.

(2) Audit-related fees consist of fees billed for professional services rendered in connection with assurance and related services not included under Audit Fees .

The Board of Auditors (also in its role as TIM s Audit Committee), in accordance with and to the extent permitted by applicable Italian law, is responsible for the appointment, retention and oversight of the work of the Company s external auditors engaged for the purpose of issuing the audit report on the annual financial statements. In accordance with Italian law and, since January 1, 2017, with European regulation, the Board of Auditors makes a reasoned proposal to the Shareholders Meeting which appoints the external auditors and determines their compensation.

During 2017 and as a result of the above mentioned new legislation, TIM, together with its Board of Auditors, adopted the Guidelines for the Assignments to the Independent Auditor (the **Group Procedure** ) which are currently in force.

The above mentioned Group Procedure provides instructions, among other things, for the following:

- assignment to audit the Company s financial statements: the assignment is authorized by TIM s shareholders meeting, acting on a reasoned proposal from the Board of Auditors;

- additional assignments: the commissioning of non-prohibited additional assignments by TIM and its subsidiaries is subject to the authorization by the TIM s Board of Statutory Auditors.

An authorization is not granted if the service falls within a category of services not permitted by current law and regulation or if it is inconsistent with maintaining auditor independence.

The Group Procedure provides the following list (not exhaustive) of audit and permitted non-audit services which are subject to the authorization by the TIM Board of Auditors or, where applicable, by the relevant Audit Committees of the subsidiaries that are classified as SEC-registered, or PIEs. The latter determinations are endorsed by the TIM Board of Auditors, provided that they are made on the basis of rules compliant with the applicable regulations including United States regulations and in conformity with the Group Procedure in the matter:

**Audit Services:**

- audit of the financial statements and reporting packages for consolidation of TIM s subsidiaries;

- review of the working papers of another auditor when necessary for the audit of the financial reports of TIM or companies it controls;

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**Item 16C. Principal Accountant Fees And Services**

- verification services for the issue of consent letters;
- auditing of financial statements and/or balance sheets to be published in prospectuses and disclosure documents, offering memoranda and the like;
- assistance with requests from the *Commissione Nazionale per le Società e la Borsa* (The Italian Companies and Stock Exchange Commission CONSOB) and the US Securities and Exchange Commission (SEC) or any similar authorities;
- auditing/control services in connection with the awarding of grants/loans or obtaining specific tax or social security contribution treatment;
- verification of the conformity of so-called sustainability and social reports (similarly, this includes if applicable the Attestation Service on non-financial information in accordance with Italian Legislative Decree No. 254/2016);
- issuance of comfort letters in relation to the implementation of extraordinary financial transactions;
- reports and opinions requested by law to the Appointed Auditor;
- various attestation services (including those for participating in tenders called by national and/or multi-national government entities).

**Permitted Non-audit Services:**

- agreed procedures on regulatory accounting areas;
- financial due diligence procedures on companies subject to sale and acquisition.

Furthermore, in accordance with the Group Procedure above, the Manager responsible for preparing the Company s financial reports (who acts under the supervision of the TIM Board of Auditors) sends, on a quarterly basis, to the Board of Auditors and to the Control and Risk Committee, the information gathered on any Additional Assignments awarded.

## Item 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Please see Item 10. Additional Information 10.1. Corporate Governance .

## Item 16E. REPURCHASES OF EQUITY SECURITIES

From January 1, 2018, to December 31, 2018, no purchases of Ordinary Shares or Savings Shares were made by or on behalf of TIM or any affiliated company.

## Item 16F. CHANGE IN REGISTRANT S CERTIFYING ACCOUNTANT

PricewaterhouseCoopers S.p.A. ( **PwC** ) has been the independent registered public accounting firm for TIM Sp.A and its subisidiaries ( **TIM** ) and was appointed by TIM s shareholders meeting on April 29, 2010 for the 2010-2018 fiscal years.

In accordance with European and Italian legal regulations relating to the mandatory rotation of independent audit firms for public companies, no renewal or extension of the accounting firm is permitted. As a result of such regulations the Company did not seek to renew PwC s contract beyond nine years when it expired and PwC did not attempt to stand for re-election.

On March 29, 2019, TIM s shareholders meeting approved the appointment of Ernst & Young S.p.A. as the Company s new independent registered public accounting firm for a nine-year term beginning with the fiscal year commencing on January 1, 2019.

The audit reports of PwC on the Consolidated Financial Statements of TIM as of and for the years ended December 31, 2018 and 2017, did not contain any adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope or accounting principles.

During the fiscal years ended December 31, 2018 and 2017 and the subsequent interim period through April 16, 2019, there were no (1) disagreements (as defined in the instructions to Item 16F of Form 20-F) with PwC on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedures, which disagreements, if not resolved to their satisfaction, would have caused them to make reference thereto in connection with their opinion, or (2) reportable events (as defined in Item 16F of Form 20-F).

The Company has provided PwC with a copy of the foregoing disclosure and has requested that they furnish the Company with a letter addressed to the SEC stating whether they agree with such disclosure and, if not, stating the respects in which they do not agree. A copy of PwC s letter, dated April 16, 2019, in which PwC states that they agree with such disclosure, is filed herewith as Exhibit 15.1.

During the two most recent fiscal years prior to the appointment of Ernst & Young S.p.A. as our independent registered accounting firm and the subsequent interim period through April 16, 2019, neither we nor anyone on our behalf consulted Ernst & Young S.p.A. regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements, nor has Ernst & Young S.p.A. provided to us any written report or oral advice on any accounting, auditing or financial reporting issue, or (ii) any matter that was either the subject of a disagreement , as that term is defined in Item 16F(a)(1)(iv) of Form 20-F and the related instructions to Item 16F of Form 20-F, or a reportable event, as that term is described in Item 16F(a)(1)(v) of Form 20-F.

## Item 16G. CORPORATE GOVERNANCE

### 16G.1 DIFFERENCES IN TIM S CORPORATE GOVERNANCE AND NEW YORK STOCK EXCHANGE CORPORATE GOVERNANCE PRACTICES

We believe the following to be the significant differences between our corporate governance practices and NYSE corporate governance rules applicable to US companies.

*Independent Directors.* Under NYSE listing rules applicable to US companies, independent directors must comprise a majority of the board of directors.

Article 147-ter of the Italian Consolidated Law on Finance requires boards, with more than seven members, to have at least two directors who meet the criteria set forth by Article 148 for the independence of the members of the Board of Statutory Auditors; in addition the Borsa Italiana Corporate Governance Code requires Boards of Directors to have an adequate number of independent members, and defines the criteria to be applied in determining independence. TIM s Corporate Governance Principles incorporate by reference the same independence criteria set forth by the Borsa Italiana Code. Presently 12 out 15 members of the TIM Board qualify as independent, as they meet both the requirements set forth by Article 148, and the criteria set forth by the Borsa Italiana Corporate Governance Code. For a description of how the Company s bylaws (through the specific rules governing the appointment of the Board) provide for an adequate number of appointees being independent, see Item 10. Additional information-10.1 Corporate Governance .

*Non-management Directors Meeting.* Pursuant to NYSE listing standards, non-management directors must meet on a regular basis without management present and independent directors must meet separately at least once per year. Borsa Italiana s Corporate Governance Code requires independent directors to meet at least once a year without management present.

TIM s Corporate Governance Principles establish the position of Lead Independent Director. The position is intended to provide a point of reference and coordination for the needs and inputs of the independent directors and is entrusted with the power to call special meetings of independent members (Independent Directors Executive Sessions) to discuss, separately from the management, issues related to the working of the Board and the management of the business. In 2018 a total of 2 such sessions were held, in addition to 3 other meetings of independent directors, which were held for other purposes. The Lead Independent Director may use the Company s support functions in performing his tasks. As of April 8, 2019 the position is held by Dante Roscini. For further details, see also Item 10. Additional information 10.1 Corporate Governance Board of Directors Executive Directors and Activities of the Board .

*Board of Directors Internal Committees.* According to NYSE listing standards, US companies listed on the NYSE are required to have a Nominating/Corporate Governance Committee, a Compensation Committee and an Audit Committee. Also according to Borsa Italiana s Corporate Governance Code, the Board of Directors shall establish among its members a Nominating Committee (made up, for the majority, of independent directors) a Remuneration Committee (made up of independent directors or of non-executive directors, the majority of which are to be independent) and a Control and Risk Committee (made up of independent directors or non-executive directors, the majority of which are to be independent).

TIM Board specifically established a Nomination and Remuneration Committee (thus combining responsibilities and roles of the Nominating Committee and the Remuneration Committee), a Control and Risk Committeeand an ad-hoc Board committee (so-called Related Parties Committee) to examine and opine upon transactions with related parties, according to Consob specific rules (see Item 10. Additional information-10.1 Corporate Governance for further details).

*Nominating/Corporate Governance Committee*. Under NYSE standards, the nominating/corporate governance committee is composed entirely of independent directors. In addition to identifying individuals qualified to become board members, this committee must develop and recommend to the board a set of corporate governance principles. Pursuant to NYSE standards, this committee should also adopt a written charter.

Article 9 of TIM s bylaws provides for the members of the Board of Directors to be elected using the slate system, which permits shareholders, who, alone or together, hold shares representing at least 0.5% of the share capital, to put forward slates of nominees for the appointment as directors: the system is intended to ensure the presence on the Board of persons designated by minority shareholders. Thus, the Company s view is that using the slate system meets the needs otherwise served by the creation of a Nominating Committee.

On the other hand, the Nomination and Remuneration Committee (made up of non-executive directors only, a majority of whom must be independent, one of them chosen from a minority slate), among other activities, is in charge of submitting to the Board of Directors candidates for appointment as director in case of co-optation, should the replacement of independent directors be necessary. In addition TIM has a Control and Risk Committee (made up of non-executive directors only, a majority of whom must be independent, one of them chosen from a minority slate) which, among other activities, actively participates and assists in developing and implementing the corporate governance procedures adopted by TIM.

For further details, see also Item 10. Additional information 10.1 Corporate Governance Board of Directors Internal Committees .

*Remuneration Committee.* Under NYSE standards, the Remuneration Committee is composed entirely of independent directors. In addition to the review and approval of corporate goals relevant to CEO compensation and evaluation of the CEO performance in light of those given, this committee must determine and approve the CEO s compensation and make recommendations to the Board of Directors with respect to non-CEO compensation, incentive-compensation plans and equity-based plans.

TIM has a Nomination and Remuneration Committee, made up of non-executive directors only, a majority of whom are independent (one of them chosen from a minority slate). Pursuant to the Company s Corporate Governance Principles, the Remuneration Committee shall, among other things:

- oversee the succession plan for Executive Directors, and monitor the updating of the company management replacement lists, prepared by the Executive directors;
- establish the procedure for the annual evaluation of the Board of Directors;
- propose the criteria for allocating the total annual compensation established by the Shareholders Meeting for the whole Board of Directors;
- perform other duties assigned to it by the Board of Directors;
- express opinions to the Board of Directors regarding its size and composition and express recommendations with regard to the professional skills necessary within the Board;

- submit the Board of Directors candidates for directors offices in case of cooptation, should the replacement of independent directors be necessary;

- periodically evaluate the adequacy, overall consistency and actual application of the policy for the remuneration of directors and key management personnel, on the basis of the information provided by the managing directors; it shall formulate proposals to the Board of Directors in that regard;

- submit proposals or issue opinions to the Board of Directors for the remuneration of executive directors and other directors who cover particular offices as well as for the identification of performance objectives related to the variable component of that remuneration; it shall monitor the implementation of decisions adopted by the Board of Directors and verify, in particular, the actual achievement of performance objectives.

According to the procedure for transactions with the Company s related parties, adopted by board resolution of June 25, 2018 and subsequently amended (available on the www.telecomitalia.com website, Governance section Governance System channel), in case of resolutions regarding the remuneration of directors and executive officers with strategic responsibilities the tasks assigned to the board committee by the TIM procedure are in this case performed by the Nomination and Remuneration Committee.

For further details, see also Item 10. Additional information 10.1 Corporate Governance Board of Directors Internal Committees .

*Audit Committee*. US companies listed on the NYSE are required to establish an Audit Committee that satisfies the requirements of Rule 10A-3 under the 1934 Act.

The Board of Auditors, as permitted by Rule 10A-3, is performing the corresponding functions for TIM, which therefore is exempted from the requirement to have a separate audit committee.

A Rule 303A written affirmation to this end was submitted to the NYSE on April 30, 2018. For further details, see also 10.1 Corporate Governance General Board of Directors and Item 10. Additional information 10.1 Corporat Governance Board of Auditors .

*Adoption and Disclosure of Corporate Governance Guidelines*. US companies listed on the NYSE are required to adopt and disclose corporate governance guidelines.

Such disclosures are included in this Form 20-F and English translations of the TIM Group s corporate governance policies can be found on TIM s website: www.telecomitalia.com under Governance .

*Code of business conduct and ethics*. NYSE listing standards require US companies to adopt a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers. The code should provide for the reporting of violations of its provisions or of laws and regulations.

TIM has adopted such a Code. See also under Item 16B. Code of Ethics and Conduct .

*Annual Certification by the Chief Executive Officer*. A chief executive officer of a US company listed on the NYSE must annually certify that he or she is not aware of any violation by the company of NYSE corporate governance standards.

In accordance with NYSE listing rules applicable to foreign private issuers, TIM submitted its foreign private issuer annual written affirmation on April 30, 2018.

**Item 16H. MINE SAFETY DISCLOSURE**

Not applicable.

**Item 17. Financial Statements**

## PART III

### Item 17. FINANCIAL STATEMENTS

Not applicable.

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## Item 18. FINANCIAL STATEMENTS

Reference is made to Item 19 for a list of all financial statements filed as part of this Annual Report.

## Item 19. FINANCIAL STATEMENTS AND EXHIBITS

***(a) Financial Statements***



***(b) Exhibits***

1.1 Bylaws of the Company.(1)

2.1 Deposit Agreements.(2)

(a) Deposit Agreement dated as of November 16, 2017, among the Company, JPMorgan Chase Bank, as Depositary and the holders from time to time of American Depositary Receipts representing Ordinary Shares of the Company.

(b) Deposit Agreement dated as of November 16, 2017, among the Company, JPMorgan Chase Bank, as Depositary and the holders from time to time of American depositary Receipts representing Savings shares of the Company.

2.2 Trust deed dated January 23, 2004, between TIM (as Issuer and Guarantor), Telecom Italia Finance (as Issuer) and J.P. Morgan Corporate Trustee Services Limited relating to a 10 billion euros Medium Term Note Program. We hereby agree to furnish to the Commission, upon its request, a copy of any instrument defining the rights of holders of our long-term debt or that of our subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.(3)

4.1 Public Telecommunications Authorization.(4)

Decision No. 820/00/CONS of 11.22.2000. General Authorization, former individual license for installation and supply of public telecommunications network and for the provision to the public of a voice telephony service (*modifications to the concessions and annexed conventions, ex SIP, Iritel and Italcable*).

4.2 Long Term Incentive Plan 2018

8.1 List of Subsidiaries.(5)

12(a) Certification by the Chief Executive Officer of TIM S.p.A.

12(b) Certification by the Head of Administration, Finance and Control of TIM S.p.A.

13.1 Section 906 Certification submitted for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.

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### Item 19. Financial Statements and Exhibits

15.1 Letter from PricewaterhouseCoopers S.p.A. dated April 16, 2019, regarding change in independent registered public accounting firm.

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference to the Exhibits filed with the Company s Annual Report on Form 20-F on April 12, 2017 (File No. 001-13882).

(2) Incorporated by reference to the Exhibits filed with the Company s Annual Report on Form 20-F on April 16, 2018 (File No. 001-13882).

(3) Incorporated by reference to the Exhibits filed with the Company s Annual Report on Form 20-F on June 10, 2004 (File No. 001-13882).

(4) Incorporated by reference to the Exhibits filed with the Company s Annual Report on Form 20-F on June 29, 2001 (File No. 001-13882). (P)

(5) Please see Note 43 List of Companies of the TIM Group of the Notes to the Consolidated Financial Statements included elsewhere herein.

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**Item 19. Financial Statements and Exhibits**

**SIGNATURE**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant certifies that it meets all the requirements for filing on Form 20-F and has duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized.

**TIM S.p.A**

| | |
|---|---|
| By: | /S/ Luigi Gubitosi |
| **Name:** | **Luigi Gubitosi** |
| **Title:** | **Chief Executive Officer** |

Dated April 16, 2019

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of TIM S.p.A.

***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated statements of financial position of TIM SpA and its subsidiaries (the Company ) as of December 31, 2018 and 2017, and the related consolidated income statements, statements of comprehensive income, statements of changes in equity and statements of cash flow for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the consolidated financial statements ). We also have audited the Company s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

***Basis for Opinions***

The Company s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management s Annual Report on Internal Control over Financial Reporting appearing in item 15.2. Our responsibility is to express opinions on the Company s consolidated financial statements and on the Company s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control over Financial Reporting***

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers S.p.A.

Milan, Italy

April 16, 2019

We have served as the Company s auditor since 2010.

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**Consolidated Financial Statements** **Consolidated Statements Of Financial Position**

**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION AS OF DECEMBER 31, 2018 AND DECEMBER 31, 2017 ASSETS**

| | Note | As of December 31, 2018 | As of December 31, 2017 |
|---|---|---|---|
| | | (millions of euros) | |
| **NON-CURRENT ASSETS** | | | |
| **Intangible assets** | | | |
| Goodwill | 5 | 26,769 | 29,462 |
| Intangible assets with a finite useful life | 6 | 8,889 | 7,192 |
| | | **35,658** | **36,654** |
| **Tangible assets** | 7 | | |
| Property, plant and equipment owned | | 14,251 | 14,216 |
| Assets held under finance leases | | 1,895 | 2,331 |
| | | **16,146** | **16,547** |
| **Other non-current assets** | | | |
| Investments in associates and joint ventures accounted for using the equity method | 8 | 16 | 17 |
| Other investments | 8 | 49 | 51 |
| Non-current financial assets | 9 | 1,594 | 1,768 |
| Miscellaneous receivables and other non-current assets | 10 | 2,291 | 2,422 |
| Deferred tax assets | 11 | 1,136 | 993 |
| | | **5,086** | **5,251** |
| **TOTAL NON-CURRENT ASSETS (A)** | | **56,890** | **58,452** |
| **CURRENT ASSETS** | | | |
| Inventories | 12 | 389 | 290 |
| Trade and miscellaneous receivables and other current assets | 13 | 4,706 | 4,959 |
| Current income tax receivables | 11 | | |